



To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 1

January 1985

CHAPTER NEWS

Blue Mountain

For information about January activities, call Chapter President Harry Oswald, 276-1241 (days).

Corvallis

8 Jan., Tues.

SLIDE SHOW/DESSERT POTLUCK, postponed from Dec. Bring about 15 of your best slides from last year. 8 p.m. at Esther McEvoy's house, 3290 SW Willanette, Corvallis. Call 754-0893 for details & directions.

14 Jan., Mon.

MEETING, 7:30 p.m., Forestry Sciences Lab, 3200 Jefferson Way, Large Conference Room (at top of stairs, above main entrance). EIGHT DOLLAR MOUNTAIN & WILD-FLOWERS OF SOUTHWESTERN OREGON, presented by Wendell Wood & Diane Kelsay of the Oregon Natural Resources Council; a discussion & multi-image audio-visual presentation on botanically unique S8 Mtn. & the region of the state with the greatest concentration of rare & endemic plants. Don't miss this outstanding production!

Emerald

14 Jan., Mon.
(note change)

MEETING, 7:15 p.m., Amazon Park Community Center, north craft building. Dr. David Wagner, Curator of the U of O Herbarium, will give a presentation on MOSSES.

19 Jan., Sat.

FIELD TRIP to Hardesty Mtn. to look for mosses, led by Dave Wagner. Meet at the parking lot at South Eugene High School at 9:00 a.m.

High Desert

29 Jan., Tues.

MEETING, 7:30 p.m., Room 237 of the Modoc science building of COCC (note change in meeting place). David Danley will tell us about his NEW PENSTEMON FIND & explain the procedure by which he determined it to be a new species. New officers will be installed.

Mid Columbia

2 Jan., Wed.

MEETING, 7:30 p.m., Mosier School.

Portland

8 Jan., Tues.

MEETING, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson. FROM THE JOHN DAY TO THE BASQUE HILLS, an overview of areas, particularly in SE Oregon, currently in BLM study as potential Desert Wilderness. Program by Nancy Peterson, NW field coordinator for the Oregon Natural Resources Council. Plus Mike Fahey's OLYMPIC MOUNTAINS.

19 Jan., Sat.

WORKSHOP, 10:00 a.m., First United Methodist Church. ARTEMISIA IN THE COLUMBIA GORGE, with Russ Jolley.

- 26 Jan., Sat. WORKSHOP, 10:00 a.m., First United Methodist Church. LEARN THE LICHENS, with Glenn Malthall. Please bring lichens to be identified, hand lens, scissors, tweezers, & The Lichens by Mason E. Hale.
- 2 Feb., Sat. WORKSHOP, 10:00 a.m., First United Methodist Church. NORTHWEST ALLIUMS, with Calvin Burt.
- 9 Feb., Sat. WORKSHOP, 10:00 a.m., First United Methodist Church. UNLOCKING THE MYSTERIES OF PLANT KEYS, with Julie Kierstead. Please bring Hitchcock & a hand lens, plus whatever dissecting tools you have.
- 10 Feb., Sun. 2ND ANNUAL POTLUCK, 1:00 p.m. at the Leach Garden, 6704 SE 122nd, Portland. Details in the February Bulletin, or call Elizabeth Handler, 244-5320.
- 23 Feb., Sat. WORKSHOP, 10:00 a.m., First United Methodist Church. PLANT COMMUNITIES AS FOREST ECOSYSTEM INDICATORS, with Nancy Halverson.
- 2 Mar., Sat. WORKSHOP, 10:00 a.m., First United Methodist Church. UNDERSTANDING THE PRONUNCIATION OF BOTANICAL LATIN, with Father Martin Thielen.

Siskiyou

- 10 Jan., Thurs. MEETING, 7:30 p.m., Rm. 171, SOSC Science Bldg. MEDICINAL PLANTS OF THE SISKIYOU, by Tom Ward.

Willamette Valley

- 21 Jan., Mon. MEETING, 7:30 p.m., First United Methodist Church, corner of State & Church Sts., Salem (use the Church St. entrance). MEMBERS' SLIDE PRESENTATION--each person may bring 15-20 of his or her favorite wildflower slides, including some "unknowns" for identification.

Portland Chapter SECOND ANNUAL POTLUCK

Sunday, 10 February 1995

Last year's potluck was such a rousing success that there's no question we will make it an annual event! Spend the afternoon and share a meal with your native plant society "family". Bring a potluck dish of your choice, and table service for yourself; beverages will be provided. There's lots of room at the Leach house, so bring family and friends if you like. Please call Elizabeth Handler (244-5320) by Feb. 7, to tell her how many people will be in your party. The Leach garden is located at 6704 SE 122nd Ave. (.2 mi. S of Foster on 122nd--parking on S side of Johnson Creek). Be there!!

BOARD MEETING IN SALEM JAN. 19TH

The next meeting of the NPSO State Board of Directors will be held on January 19, at 12 noon (eat before you come, as only snacks will be available for sustenance). The meeting place is the First United Methodist Church, 600 State St., Salem. To get there:

From I-5, take the Mission St. exit (#253), turning W on Mission St.

Stay on Mission St. for about 2 mi., going through 3 signals

Turn right on 13th, which is the 4th signal. Get in left lane immediately, and onto Pringle Parkway; stay on Parkway through 2 signals

Turn right on Church St., which is the 3rd signal

The First United Methodist Church is in that block; park and enter from the Church St. side. The meeting is in the Carrier Room.

The Nominating Committee is expected to report on nominations for new state officers.

LEGISLATIVE REPS NEEDED FROM CHAPTERS

ALL CHAPTERS PLEASE NOTE: Esther McEvoy, NPSO state legislative chair, would like each chapter to appoint a representative to work with her in preparing state legislation to protect Oregon's T/E plants. Quick action will be much appreciated--there is plenty of work to be done! Chapter presidents, please call Esther at 754-0893 as soon as your legislative rep has been chosen.

OLD BULLETINS NEEDED

Copies of some back issues of the Bulletin are all gone. If you normally throw your Bulletin away after reading it, please consider giving it back to NPSO. If you are about to clean your basement and throw out some really old issues, DON'T. We are trying to compile complete sets of Bulletins for archival purposes. Donation of complete sets would be especially welcome.

Plans are steadily progressing for the Conference of Western Native Plant Societies, Aug. 3, 4, & 5, LaGrande, Oregon. Dates have been pushed up one day; thus, the Conference will begin Sat. Aug. 3 and end at noon Mon. Aug. 5. This change was made necessary by Eastern Oregon State College's summer schedule.

Mike Fahey, Program Chair, has made excellent program suggestions and it is hoped that somehow we'll be able to work them all into our agenda.

Field trips are more or less set, with two scheduled for the Anthony Lakes area and one to Mt. Howard, above Mallowa Lake. These will be held on Sat. Aug. 3. Sign up sheets for each trip will be provided at registration time.

We look forward to a large attendance, especially from NPSO members. LaGrande was chosen for the Conference location because of the great opportunities for exciting field trips; but the success of this undertaking will depend largely on the cooperation of all NPSO members.

If representatives come from even half of the 8 western state societies invited, our efforts will not have been in vain. All members have a common interest; half the fun of a conference is in meeting old friends and making new ones.

Brochures will soon be ready for distribution, as will registration sheets giving pertinent information on housing and food rates.

Ruth M. Hansen, Chair

NEW NOTECARDS
HAVE ARRIVED !
NEW COLORS
NEW DRAWINGS
SAME PRICE
\$2.50 PER PACK
ALL PROCEEDS
GO FOR PROTECTION
OF OREGON'S
RARE & ENDANGERED
PLANTS
GET YOUR CARDS TODAY
MAKE GREAT GIFTS !
FLOWERS FOREVER

HOW ABOUT A T-SHIRT?

The New Year is time for a new T-shirt! NPSO T-shirts are available in three designs, featuring drawings of western trillium (Trillium ovatum--green on yellow shirt) and prickly pear (Opuntia polyacantha--black on silver-grey shirt) by Julie Kierstead, and cobra lily (Darlingtonia californica--black on plum-lavender shirt) by Linda Vorobik. The heading "Native Plant Society of Oregon" appears above the drawing on each shirt. Shirts are short-sleeved, preshrunk 100% cotton in men's sizes S, M, L. Opuntia is also available in XL. Cost is \$7.00 to individuals, plus \$1 postage. Most chapters have a few shirts on hand to sell at meetings (chapters may purchase shirts for \$6.00). Special orders such as French cut, long sleeve, & sweatshirts are possible with a minimum order of 12 of one color. When ordering, please indicate size and design, and a second choice, if there is an acceptable one. Make checks out to Emerald Chapter, NPSO. Order from: Leighton Ho, 1826 1/2 Lincoln St., Eugene 97401; phone 345-3252.

ONRC FOREST PLANNING WORKSHOP

On January 12, 1985, the Oregon Natural Resources Council will sponsor a statewide forest planning workshop at the Stosh Thompson ranch. Forest resources experts from every corner of Oregon will attend, and ONRC encourages all interested conservationists to come. Emphasis will be on completion of Conservationists' Alternatives, understanding the Forest Service process, and strategy.

The "Conservationists' Alternative" for each national forest will be displayed in the Environmental Impact Statement, along with the 8-12 Forest Service alternatives. Working together, conservationist representatives and Forest Service planners will use the citizen-generated maps and compute the outputs and costs, in order to make them comparable to the other alternatives.

Contact any ONRC office for details:

Main office: 1161 Lincoln, Eugene 97401
344-0675

Metro office: Dekum Bldg., Suite 706, 519 SW 3rd,
Portland 97204; 224-0201

Eastern Oregon Field Office:
Box 9, Prairie City 97869
820-3714

SW Oregon Field Office:
P.O. Box 638, Ashland 97520
482-4356

WINTER CLASSES AT LEACH GARDEN

All activities are free and open to the public, unless otherwise noted. Leach Botanical Park is located at 8704 SE 122nd Ave., Portland, 97236. Call 761-9603 for more information.

January

- 12 (Sat.) 10-11 a.m. Guided Tour
 19 (Sat.) 9-11 a.m. Class on Conifers, by George Lewis
 19 (Sat.) 10-11 a.m. Guided Tour
 23 (Wed.) 7:30 p.m. Geology of Johnson Creek Basin
 26 (Sat.) 10-11 a.m. Guided Tour

February

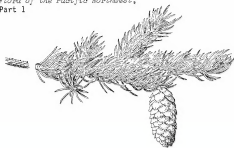
- 2 (Sat.) 9-10 a.m. Native Winter Twig class
 2 (Sat.) 10-11 a.m. Guided tour
 9 (Sat.) 10-11 a.m. Guided tour
 13 (Wed.) 7:30 p.m. Starting Tuberous Begonias class, by Rita Greenup
 16 (Sat.) 9-10 a.m. Bird & Spring Flowers class
 16 (Sat.) 10-11 a.m. Guided Tour
 17 (Sun.) Afternoon: Open house for friends and neighbors
 20 (Wed.) 7:30 p.m. The Galapagos Islands, slide presentation, by Betty Ferguson
 23 (Sat.) 10-11 a.m. Guided Tour
 27 (Wed.) 7:30-9:30 p.m. Pine Needle Basket Making, by Gerry Russell (3 sessions). Registration fee \$12. Bring your own crewel needle (#3) and scissors.

March

- 6 (Wed.) 7:30 p.m. Pine Needle Basket Making, session 2
 9 (Sat.) 10-11 a.m. Guided Tour
 16 (Sat.) 9-10 a.m. Flowers & Trees in Bloom class
 16 (Sat.) 10-11 a.m. Guided Tour
 20 (Wed.) 7:30 p.m. The Columbia River Gorge
 23 (Sat.) 10-11 a.m. Guided Tour
 30 (Sat.) 10-11 a.m. Guided Tour

Picea engelmannii
 Engelmann spruce

Drawing from Hitchcock et al.,
Flora of the Pacific Northwest,
 Part 1



STILL A FEW LEFT!
"MUSHROOM MADNESS"
HIGHLIGHTS COOKING
WITH WILD MUSHROOMS
OREGON RECIPES,
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RARE PLANT CONFERENCE HELD

On the weekend of November 3-4, Oregon's statewide rare plant conference was held in Eugene. Co-sponsored by the Oregon Natural Heritage Data Base, the University of Oregon Herbarium, and The Nature Conservancy, it was widely attended by botanists throughout the state. Much important information was exchanged. As a result, the Data Base publication "Rare, Threatened and Endangered Plants and Animals of Oregon" will be updated and reprinted in early 1985.

Thank you to all who attended and made it a success. Special thanks to Dave Wagner for organizing and arranging the facilities and to the contingent from the OSU Herbarium who contributed so much valuable data. See you all at the next conference!

Curt Soper
 Jimmy Kagan
 Sue Yamamoto
 John Gamon
 (Data Base staff)

FLOWERS FOREVER

by Rhoda Love

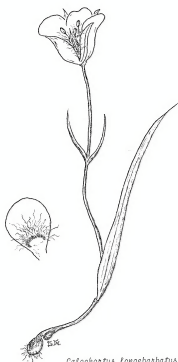
NEW NPSO NOTECARDS ARE HERE!

The Cards. Our beautiful new NPSO notecards, featuring Oregon Rare & Endangered Plants, came off the press in Eugene just before Thanksgiving. The 1985 cards are printed on four colors of heavy card stock. Printing has been done with dark green ink on blue, yellow, cream and green paper. There are matching envelopes in the same colors. Each pack of cards is made up of 8 cards and 8 envelopes; each card is different. Not only are the cards more beautiful than ever before, but the cost has not changed. Packs will still be available for \$2.50 to NPSO members.

The Plants. The Oregon Rare and Endangered Plants illustrated in this new card series are: White top aster (*Aster curtus*) from the southern Willamette Valley and Washington state; Long-bearded mariposa lily (*Calochortus longebarbatus* var. *longebarbatus*) from the eastern slope of the Cascades; Cook's losatium (*Losatium cookii* sp. nov. in ed.), the new desert parsley discovered by Jimmy Kagan in the Agate Desert in SW Oregon; and the artist's special favorite, White rock larkspur (*Delphinium leucophaeum*) from rocky cliffs in the northern Willamette Valley.

The Artist. Gaylee Goodrich of Emerald Chapter designed our lovely new cards. Gaylee recently completed her MS under Stan Cook and David Wagner at the University of Oregon. Her research was on Willamette Valley Delphiniums. Gaylee's graduate research was aided by an NPSO Jean Davis Memorial Scholarship in 1982. (See Gaylee's article on Delphiniums in the NPSO Bulletin for January, 1982.) Gaylee has written an illustrated key to Delphiniums which is available by sending \$1.50 to her at 4110 Hilyard St., Eugene, OR 97405.

The Money. All proceeds from the sale of NPSO notecards goes to aid our Society's R & E Plant Project chaired by Jean Siddall. We printed 1000 packs of cards and the cost was \$682.08. By selling the cards for \$2.50/pack, NPSO clears \$1.82/pack for protection of Oregon's rare plants. As soon as 273 packs of the new design are sold, we will have made expenses. This is an opportunity for us to raise \$1,800 for Oregon's rare flora. I know you will all want to buy at least 2 packs—one to use and one to give to a friend. Please use the new cards to



Calochortus longebarbatus
var. *longebarbatus*

Drawing by Gaylee Goodrich

write to your state legislators in this legislative year. Remind them that we need state protection for our rare plants now.

George Lewis of Portland Chapter has kindly volunteered to handle state distribution of the cards. Chapters should purchase cards in boxes of 20 packs at \$40.00/box. By selling cards for \$2.50/pack, chapters then make \$.50/pack for their treasuries. George will bring boxes of cards to our Board meetings, or you can order from him. George can be reached at 8230 SW Cashaur Lane, Portland 97225 or call 292-0415.

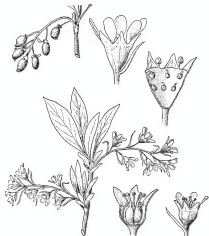
Many thanks to Gaylee and to George for helping with this important NPSO fund-raising project.

Under the above heading, I wish to discuss certain examples of recent changes in the names of some well-known (and some not so well-known) Oregon plants—a subject that is technically given the imposing title of "botanical nomenclature." The names of plants are very important to us; there is hardly any way we can talk about plants without mentioning their names. Therefore, when the name of a familiar species is altered, it is somewhat analogous to having a human friend of ours change their name. Betty Smith marries and becomes Betty Jones, and it takes us a while to become adjusted to using this new "nomenclature." Of course, when plants "change their names," it is really because we humans—the classifiers—have chosen to assign them new labels. The plants themselves are unaffected by the procedure.

It is easiest to understand the reasons behind the renaming of particular plants if we distinguish between obligate changes and optional changes. Obligate changes are made when the former name is found to be impermissible according to internationally agreed upon rules of nomenclature. Optional changes, on the other hand, arise when botanical research shows that there are alternative ways of viewing the relationships of a species. A different name may be required in order to express the revised view of relationship, but we are not duty bound to agree with the modified nomenclature. When given a choice between alternative names for a plant, we may decide to use the one we are more familiar with, the one found in our favorite reference book, the one we hear our friends using, or even the one some "expert" advises us to use.

As an example that combines both the above changes, let us consider the plant known as Pale Montia. On page 108 of the book "Flora of the Pacific Northwest," this is assigned the Latin name *Montia apathulata*. At the OSU Herbarium we prefer to use the name *Claytonia exigua* for this plant; what justification is there for such a change? Firstly, a check of old reference books shows that "apathulata" is an impermissible name for the species. We are thus obliged to change this to "exigua" according to the rules of nomenclature. Secondly, an option exists as to whether the relationships of the species are more with the genus *Montia* or the genus *Claytonia*. By giving it the latter generic name, we are expressing our opinion that it is more similar to (i.e. related to) Spring-beauty (*Claytonia lanceolata*) than it is to Water Chickweed (*Montia fontana*). Anyone who prefers to retain this species in the genus *Montia* is free to use its alternative correct name, *Montia exigua*.

To see how the concept of obligate changes works, we can look at three recent



Oenleria cerasiformis (= *Osmaronia c.*)

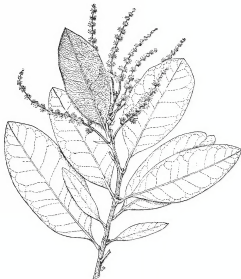
Drawing from Hitchcock et al., *Flora of the Pacific Northwest*, Part 3.

modifications in the generic names of some Oregon plants. Citing pages in "Flora of the Pacific Northwest," we find *Eurotia* (Chenopodiaceae, pg. 99), *Peltiphyllum* (Saxifragaceae, pg. 192), and *Oenleria* (Rosaceae, pg. 215). The first two names in this list are incorrect and must be changed, because by the rules of nomenclature they do not have "priority;" that is, they were not the earliest names proposed for their respective genera. Hence, Winterfat (*Eurotia lanata*) must be renamed *Ceratoides lanata*, while Indian Rhubarb (*Peltiphyllum peltatum*) must be called *Dacrydium peltatum*. These changes are merely corrections of long-standing errors, one of which had been unwittingly perpetuated for over 200 years. *Eurotia*, for example, was proposed in 1763, while the earlier name *Ceratoides* (dating from 1735) was overlooked by botanical archivists until 1971! *Peltiphyllum* (proposed in 1891) can not be used for the Indian Rhubarb because the same name had earlier, in 1843 and 1854, been given to two other plant genera. We call *Peltiphyllum* an "illegitimate name" and replace it with *Dacrydium*, proposed in 1899.

Oenleria is the correct generic name for the common shrub Indian Plum, but in all older reference books it was incorrectly named *Osmaronia*. The problem is simply one of priority; *Oenleria* was proposed in 1841, in an obscure German scientific journal, and was overlooked by the American botanist who assigned the name *Osmaronia* in 1891. No one caught the error until 1970.

Four recent examples can be cited of optional new names for Oregon plants--that is, proposed nomenclatural changes which we may or may not adopt, as we choose. One such change, which has become quite popular in the sense of being widely adopted, is to call the common Incease-cedar by the generic name *Calocedrus* instead of *Libocedrus*. Around 1956 it was suggested that our North American tree was quite different from *Libocedrus* of South America and ought to be placed in its own genus. A very similar example in the oak family, which has not yet caught on so widely, is to rename the Chinquapin as *Chrysolepis* instead of *Castanopsis*. True *Castanopsis* consists of some 25 species in southeast Asia. Whether our two North American species are different enough to form a separate genus is still an open question. The optional new name for Giant Chinquapin is *Chrysolepis chrysophylla*.

Readers familiar with the southwestern Oregon flora will recognize the generic name *Zauschneria*. This genus of shrubs with showy orange-red flowers ranges from Curry County to southern California; it is a member of family Onagraceae. Except for its distinctive flower color--an adaptation for pollination by hummingbirds--the genus is quite similar to *Epilobium*, i.e. willow-herb and fireweed. In 1976 it was formally proposed to merge *Zauschneria* into *Epilobium*; if this optional change is adopted, the Oregon species takes the name *Epilobium* genus. A similar example appears in the family Ericaceae, where as long ago as 1943 it was suggested that Oregon's only endemic genus, *Kalmiopsis*, ought to be merged with the closely related European plant *Rhodothamnus*. The two genera are reported to hybridize readily when cultivated together in European gardens. Since our plant would take on the unfamiliar name *Rhodothamnus laschianus* if the genera were combined, it is unlikely that many faithful Oregon plant lovers will choose to make the change.

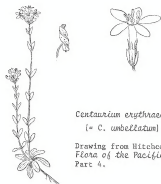


Castanopsis chrysophylla
(=*Chrysolepis* c.)

Drawing from Sudworth, G.B. 1908.
Forest Trees of the Pacific Slope.

The above examples illustrate how the names of plant genera may be altered if research shows that their relationships were misunderstood or that their earliest correct name has been overlooked. Species names may also undergo change, as was shown by the example of Pale Montia. I will end this article by mentioning five examples of common Oregon species which must receive different names than the ones appearing in our current reference books. The Common Reed, *Phragmites communis*, must be renamed *Phragmites australis*. Goldfields, *Lasthenia chrysostoma*, is now named *Lasthenia californica*. In the Onagraceae family there are two changes: Common Evening Primrose, *Oenothera atriglossa*, must be called *Oenothera villosa*, while Autumn Willow-herb, *Epilobium penicillatum*, changes to *Epilobium brachycarpum*. In the gentian family, Common Centaury, *Centaurea umbellatus*, now must be named *Centaurea erythraea*. Nearly all these changes came from discoveries of an earlier-published name, which by the rule of priority must replace a better-known name. In time, the correct names will become well-known, and nomenclatural stability will (we hope!) be reached.

Kenton L. Chambers
Oregon State University



Centaurea erythraea
(= *C. umbellatus*)

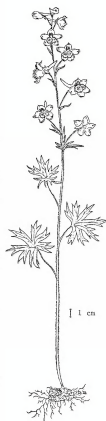
Drawing from Hitchcock et al.
Flora of the Pacific Northwest,
Part 4.

A KEY TO SOME OREGON LARKSPURS (*Delphinium* spp.)

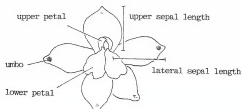
text and drawings

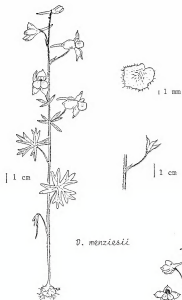
by Gaylee Goodrich

- 1a Pubescence on lower petal edge 1-2 mm (mostly 1.5 mm) long and typically crisped. Follicles ascending, closely appressed for most of their length at maturity.
 - 2a Lateral sepals 9-12 mm (avg. 11 mm) long and white or cream colored with green umbos. Upper petals blue or purple. Pedicels up to 40 mm long. Sepals only slightly cupped. Plant of basalt cliffs, ledges, or plateaus, near the mouth of the Willamette River, blooming late May through early July; white rock larkspur, pale larkspur (*D. nuttallii* var. *l.*, *D. willametteense*).
..... *D. leucophaeum* Greene
 - 2b Lateral sepals 6-9 mm (avg. 7 mm) long, purple or blue colored and often with a prominent gray, green, or blue umbo. Upper petals typically blue, often with a white basal edge. Pedicels up to 21 mm long. Sepals usually cupped far forward even at full floral development. Plants of Washington State and the Columbia Gorge, blooming June through early July; Nuttall's larkspur (*D. columbianum*).
..... *D. nuttallii* Gray
- 1b Pubescence on lower petal edge less than 1 mm long (mostly 0.3 mm), usually not crisped. Follicles spreading at maturity.
 - 3a Plants less than 39 cm (avg. 33 cm), typically with fewer than 10 flowers. Lateral sepals 14-19 mm long (avg. 15 mm). Sepals purple and typically reflexed. Upper petals white. Umbos dark or indistinct. Plants of widespread distribution in the Pacific Northwest, blooming April and May at low elevations, through August at high elevations; Menzies' larkspur. *D. menziesii* D.C.
 - 3b Plants greater than 33 cm., with many flowers. Lateral sepals 9-16 mm long. Sepals white, purple, or blue, usually slightly cupped or evenly spread, typically not reflexed. Upper petals blue, purple, or white. Umbos variable.
 - 4a Plants greater than 39 cm (avg. 59 cm), with lateral sepals 12-16 mm long (avg. 14 mm). Sepals white or cream in color, with green or blue umbos. Upper petals purple, blue, or white. Pedicels up to 45 mm long. Occasional hybrid plants with purple sepals and white, blue or purple upper petals. Plants of low wet floodplain areas in the central Willamette Valley, blooming in May and June; peacock larkspur. *D. pavonaceum* Ewan
 - 4b Plants 33 to 59 cm (avg. 46 cm), with lateral sepals 9-13 mm long (avg. 11 mm). Sepals bright blue in color, umbos dark blue or indistinct. Upper petals typically whitish with light blue front edges or blue-veined. Pedicels up to 23 mm long. Plants of foothills of the Cascade and Coast ranges in Oregon, blooming late June to early August; Willamette Valley larkspur.
..... *D. oregonum* How.

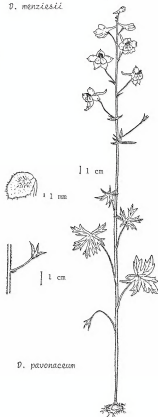


D. leucophaeum





D. menziesii



D. pavonaceum



D. nuttallii

D. oreganum

Field Guide to Orchids of North America by John G. Williams and Andrew E. Williams, 1983. Published by Universe Books, New York. \$10.95 paper.

This is an attractive and convenient, but not an inexpensive little book aimed at a wide audience. It describes and illustrates all orchid species found in North America north of Mexico, and includes a key to the genera of North American orchids as well as keys to species for several of the larger genera (*Cypripedium*, *Platanthera*, *Listera*, *Malaxis*, and *Spiranthes*).

The book begins with a foreword by Roger Tory Peterson, and an introduction, both of which contain the obligatory plea that we not collect orchids from the wild.

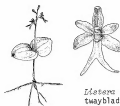
The keys, which come next, are not strictly dichotomous--for some choices three options are offered--and are only moderately technical. If you get stuck the color plates prepared by British artist Norman Arlott are good enough that you can picture-key (we all do anyway when no one is looking).

The rest of the book, with species descriptions, ranges, and illustrations, is laid out with text on the left page and plates on the right, an easy format to use. Some familiar plants are listed under unfamiliar names. Our *Habenarias* are treated under *Piperia* and *Platanthera*, the name *Habenaria* being reserved for a small group of species in the southeastern U.S. The phantom orchid is retained in *Cephalanthera* rather than *Europhyton*. I noted one curious anachronism: achlorophyllous (non-green) orchids are called saprophytes rather than mycotrophs, which is somewhat of a faux pas in botanical circles these days.

The scope of the book, covering orchids from the northern border of Mexico to the North Pole, offers the chance expand our knowledge beyond our borders, to see our familiar Northwest orchids in relation to their far-flung kin. Did you know there are bright red ladies' tresses (*Spiranthes*) in Florida? Wow!

Field Guide to Orchids of North America lives up to its title. Its small size (4 3/4 X 7 1/2 in. and slightly over 1/2 in. thick) and thorough coverage make it a useful and portable reference, easily carried in the pocket of a day pack or a large back pocket. My only complaint is the price, which at \$10.95 seems a little steep for a paperback. I suppose in comparison with what else \$10.95 will buy, it's not that bad.

J.R. Kierstead
Portland Chapter



Listera cordata
twayblade

Drawing from Hitchcock et al.,
Flora of the Pacific Northwest,
Part 1

NPSO will award a scholarship to a worthy student in an Oregon college, with his or her major study in plant systematics or plant ecology. The scholarship is in the amount of \$1,000, and is to be used toward the student's tuition within the following academic year. Deadline for applications is April 1, 1984; the award will be made by May 1, 1984.

Donations to the scholarship fund are tax deductible and are welcome at any time. All interest earned from the donations is apportioned out to as many scholarships as possible in the spring of each year, at \$1,000 each. All communication regarding this fund should be addressed to Mary Falconer, Committee chairman, 1920 Engel Ave. NW, Salem, OR 97304.

* * Rules for Scholarship Awards * *

- 1) Scholarships are available to students in Oregon colleges, planning their major study in Plant systematics or ecology.
- 2) Scholarships are awarded in the amount of \$1,000 to worthy students who will complete at least 2 years of satisfactory college work by July 1 of the year of receipt of application, & are full time students. Graduate students may be eligible if they meet all qualifications except that of "full time student".
- 3) Awards are made in the following manner:
 - a) a certificate presented to the recipient
 - b) a check in the amount of the award, submitted to the school of choice, as set forth in rule 1, to be used toward tuition within the following academic year
- 4) If an award recipient fails to enroll, changes his or her major, or leaves the school before completing the period for which the award was granted, the full amount or unused part of the money shall be returned to the Jean Davis Memorial Scholarship Fund.
- 5) Applicants are required to submit:
 - a) in their own handwriting, a statement of academic & career intent
 - b) two letters of reference from persons able to judge to student's ability to successfully complete study in the area of plant systematics or plant ecology
- 6) All applications together with items listed in rule 5 must be received by the Chairman of the Jean Davis Memorial Fund Committee no later than April 1. The award will be made by May 1.
- 7) Scholarships are not granted to members or relatives of any person currently serving on the Scholarship Committee.

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The NPS Bulletin is published monthly. Copy is due
by the 15th of the month, and should be sent to the
editor. News, articles, photos, drawings, and non-
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Membership Chair Mary Falconer
1920 Engel Ave. NW, Salem, OR, 97304
Memberships in the Native Plant Society of Oregon is
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or from chapter presidents, should be sent to the
membership chair. Changes of address, including old
address & zip code, should also be sent to the mem-
bership chair.

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221-3370.
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To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 2

February 1985

CHAPTER NEWS

Blue Mountain

For information about February activities, call Chapter President Harry Oswald, 276-1241 (days).

Corvallis

18 Feb., Mon.

MEETING, 7:30 p.m., Cordley Hall, Room 2087, Oregon State University campus. TREES, TRUFFLES, & BEASTS, by Dr. James Trappe.

Emerald

Nominees are needed for President & Vice-President of the Emerald Chapter. Please call nominating chair Gaylee Goodrich, 485-3453, with your suggestions.

11 Feb., Mon.

MEETING, 7:15 p.m., Amazon Park Community Center, north craft building. Robin & Ken Lodewick will speak on PENSTEMONS.

High Desert

There will be no meeting this month of the High Desert Chapter.

Mid Columbia

6 Feb., Wed.

MEETING, 7:30 p.m., Mosier School.

Portland

2 Feb., Sat.

WORKSHOP, 10:00 a.m., First United Methodist Church, 1838 SW Jefferson. NORTHWEST ALLIUMS, with Cal Burt.

9 Feb., Sat.
(note change)

WORKSHOP, 10:00 a.m., First United Methodist Church. LEARN THE LICHENS, with Glenn Walthall. Please bring lichens to be identified, hand lens, scissors, tweezers, & The Lichens by Mason E. Hale.

10 Feb., Sun.

2ND ANNUAL POTLUCK, 1:00 p.m. at the Leach Garden, 6704 SE 122nd, Portland. Call Elizabeth Handler, 244-5320, for details & to tell her the number in your party.

12 Feb., Tues.

MEETING, 7:00 p.m., First United Methodist Church. Alpine flowers, SWITZERLAND 1984 by Dave Dobak.

23 Feb., Sat.

WORKSHOP, 10:00 a.m., First United Methodist Church. PLANT COMMUNITIES AS FOREST ECOSYSTEM INDICATORS, with Nancy Halverson.

2 Mar., Sat.

WORKSHOP, 10:00 a.m., First United Methodist Church. UNDERSTANDING THE PRONUNCIATION OF BOTANICAL LATIN, with Father Martin Thielen.

Siskiyou

14 Feb., Thurs. MEETING, 7:30 p.m., Rm. 171, SOSCI Science Bldg., Ashland. Dave Danley, botanist for Sunriver, will speak.

Willamette Valley

18 Feb., Mon. MEETING, 7:30 p.m., First United Methodist Church, corner of Church & State Sts., Salem; in the Carrier Room. Jean Siddall, author of "A Very Artificial, Siddall Idiot Key to Mustard Genera in Oregon", will conduct a workshop on Oregon nouns.

SALEM BLM BOTANY REPORT READY

The 1984 Salem BLM Botany Annual Report is now available to botanical groups such as university & college biology departments, botanical gardens, natural history societies, conservation groups, et al. Contact the Salem BLM office, botany section, 1717 Fabry Road SE, P.O. Box 3227, Salem, OR 97302. Copying costs for the 283-page report are too high to send it to individuals.

All past Salem BLM Botany Annual Reports are available to be read at the Botany Department's Herbarium Library of Oregon State University; the reports run from October 1978 to October 1984.

ROADS INTO RANGELAND

Stephen Dow Beckham, Professor of History at Lewis and Clark College, examines the historical development of the range industries in eastern Oregon and the evolution of Federal regulations for public rangelands. This is one of a series of programs on forests and grasslands, presented by The Nature Conservancy and Western Forestry Center. Feb. 13, Wednesday, at 7:30 p.m. in Miller Hall of the Western Forestry Center, Portland; free and open to the public.

NOMINATIONS STUCK--YOUR HELP NEEDED

The nominating process for state NPSO officers is behind schedule--we are having a difficult time finding willing nominees, and several of the current officers do not want to be re-elected. However, elections will be held in March as usual. Nominees and their resumes will be published in the March Bulletin, which will also include a ballot for electing next year's officers, including three Board members. Any member willing to serve as an officer or Board member should call President Herm Fitz immediately (yesterday if possible!).

HOW ABOUT A T-SHIRT?

The New Year is time for a new T-shirt! NPSO T-shirts are available in three designs, featuring drawings of western trillium (*Trillium ovatum*--green on yellow shirt) and prickly pear (*Opuntia polyacantha*--black on silver-grey shirt) by Julie Kierstead, and cobra lily (*Darlingtonia californica*--black on plum-lavender shirt) by Linda Vorobik. The heading "Native Plant Society of Oregon" appears above the drawing on each shirt. Shirts are short-sleeve, preshrunk 100% cotton in men's sizes S, M, L. *Opuntia* is also available in XL. Cost is \$7.00 to individuals, plus \$1 postage. Most chapters have a few shirts on hand to sell at meetings (chapters may purchase shirts for \$6.00). Special orders such as French cut, long sleeve, & sweatshirts are possible with a minimum order of 12 of one color. When ordering, please indicate size and design, and a second choice, if there is an acceptable one. Make checks out to Emerald Chapter, NPSO. Order from: Leighton Ho, 1826 1/2 Lincoln St., Eugene 97401; phone 345-3252.

WINTER PICNIC FOR THE GORGE

The Third Annual Winter Picnic in celebration of supporters' efforts to preserve the Columbia Gorge is scheduled for February 23 at the Yamhill Marketplace, sponsored by the Friends of the Columbia Gorge.

For those wishing to indulge in the picnic fare donated by Portland's finest traditional restaurants, and dancing afterwards, admission is \$15. Picnic fare will include hot soups, sandwiches, fruit, desserts, and coffee. The doors will open at 7 p.m., with dinner beginning at 7:45 p.m. After 9:00 p.m., tickets for dancing only will be available for \$5.

The pace is "fun". Revelers will be able to join in a sing along with the Wham Bam Banjo Band, and then enjoy dancing music. All evening long, wine & beer will be available for purchase. Other entertainment will include a multi-media show, The Columbia Gorge: Who Is Watching, and dancing by cloggers.

Tickets for the Winter Picnic, which are limited, are available at the Friends of the Columbia Gorge office at 519 SW Third Avenue, Suite 810 in Portland. Early purchase is recommended as the picnic was sold out early last year. The public is invited to call for more information at the Friends of the Columbia Gorge office at (503) 241-3762.

FLOWERS FOREVER

by Rhoda Love

I would like to celebrate the beginning of 1985 by writing about a wonderful new book that came to my attention this holiday season.

Actually, I learned about this marvelous volume because a building on the University of Washington campus in Seattle was dedicated to C. L. Hitchcock in October! As a former student of Hitchy's, I was invited to the dedication but could not attend. Instead I sent a note of greeting to my former professors and a bit later I received a reply from Dr. B. J. D. Meeuse, a delightful Dutchman (from the East Indies) who had been my plant physiology professor a number of years ago.

Among other matters covered in his letter, Dr. Meeuse happened to mention that he had just published a new book, The Sex Life of Flowers! I have always loved one of his earlier books, The Story Of Pollination (Ronald Press, 1961), so of course I replied at once requesting a copy of the new volume.

I was thrilled when I saw the book! It is truly gorgeous. The photos by co-author Sean Morris of Oxford Scientific Films are stunning, the best I have ever seen anywhere of flowers and their pollinators.

Because, of course, The Sex Life of Flowers is about pollination! And that is one reason why I feel that it is a proper subject for my monthly column.

Allow me to briefly outline the book's contents. The first chapter reviews some theories about the evolution of sexual reproduction in plants. Then comes a close look at flowers, their structure and function. Next the author looks at the important topic of nature's taboo against inbreeding (self-pollination) and how this proscription has encouraged the close ties between flowers and their pollen vectors. The next chapter on Adaptation and Co-evolution is my favorite. Here Meeuse gets down to the finer points of specific pollination relationships (orchids and wasps, clover and bumble bees, yuccas and yucca moths and so on). Next he focuses on what he calls the "unacceptable face of pollination"—a discussion of flowers that attract dung beetles, carrion flies, fungus gnats and their ilk. He also covers here those flowers which may entrap and kill their insect visitors. He goes on to describe pollination which depends on vectors other than animals and finally

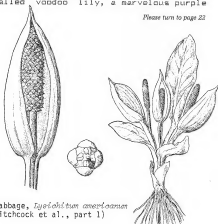
closes with a review of the importance of pollination and pollinators to mankind.

This brief review indicates the broad coverage of The Sex Life of Flowers, but it does not do full justice to the work. Meeuse has always been a genius at taking tough evolutionary and ecological theories and bringing them—via brilliant wit and analogy—within the grasp of the common reader. This he does marvelously here. In so doing, however, he sacrifices none of the scientific accuracy of the work. For example, throughout Sex Life, scientific as well as common names are used for all organisms (plants and animals), making the work as useful to the professional ecologist as it is interesting to the everyday reader.

The book is global in scope, with examples taken from plant-pollinator relationships on every continent. However, Bulletin readers will be pleased to know that, because Meeuse has spent many years in Seattle, many of his examples are drawn from the Pacific Northwest.

May I insert a bit of nostalgia? For years Dr. Meeuse has been fascinated with arum lilies. These are the plants in the monocot family Araceae, like skunk cabbages, calla lilies and lords-and-ladies which have the flowers crowded on a fleshy spadix with this surrounded by a (often) showy spathe. As some Bulletin readers probably know, when arum flowers are ready for pollination, the spadix gets hot! Metabolism in the structure is extremely rapid, causing an astounding rise in temperature. In Dr. Meeuse's physiology classes, all those years ago, we students spent many hours studying Krebs cycle reactions using ground up spadices of Saururus, the so-called voodoo lily, a marvelous purple

Please turn to page 22



skunk cabbage, *Lysichiton americanus*
(from Hitchcock et al., part 1)

Conservation Alert

DESIGNATION NEEDED: GRANDE RONDE & WALLOWA RIVERS AS OREGON SCENIC WATERWAYS

Early in June of 1982 a group of NPSO Portland Chapter members took a three day float trip on the Wallowa and Grande Ronde Rivers, from Ninam to Troy. It was a wonderful experience--the scenery was especially beautiful, the botanizing was a nice challenge, and the river was swift enough for some whitewater excitement, but no fear. There were quite a few unfamiliar plants that we worked to key out. Two of those that interested me most were *Clematis columbiana* var. *columbiana*, on the March 1982 review list of the Oregon Rare & Endangered Plant Project, and *Cypripedium montanum*, which was described in the 1979 Interim Report of OREPP as "Very Endangered in Oregon". Protection is in order for some other plants of the area too.

Many of us want to take this delightful trip again. However, there are threats to the free flow of the Grande Ronde and Wallowa Rivers. Hydroelectric projects have already been proposed. The way to prevent something like that from happening to this wonderful area is to get sections of these rivers designated as Oregon Scenic Waterways. They easily meet the qualifications of being free-flowing, outstanding for recreation, scenic, and large enough to handle increased usage while still maintaining their natural qualities. The management program works from the condition existing at the time of designation, and allows changes that do not alter the natural beauty greatly. The only things absolutely not allowed are dams, impoundments, and placer mining.

In order to accomplish this status, the Transportation Commission and Oregon Water Policy Review Board must agree to recommend that the rivers be designated as Scenic Waterways. Then Governor Atiyeh makes the final decision. Citizen input is essential. A brief letter stating your support is what is needed now. Please send one to each of these three people:

Tony Yturri, Chairman
Oregon Transportation Commission
135 Transportation Bldg.
Salem, OR 97310

Rolf Hakanson, Chairman
Oregon Water Policy Review Board
Water Resources Dept.
555 13th St. NE
Salem, OR 97310

Governor Vic Atiyeh
State Capitol
Salem, OR 97310

Thank you all,

Jeanne Huffstutter
Portland Chapter

LEGISLATIVE NOTES

As newly appointed legislative chairperson, I am drafting legislation for an Endangered Species Act for the State of Oregon. I welcome your input either in letter writing, lobbying, phoning or compiling information.

On November 4, 1984 I attended the session on legislation at the Rare Plant Conference in Eugene. Dave Wagner and Rick Brown reviewed the progress that has been made to the present date on native plant legislation. We discussed lobbying efforts, support and policies of different state agencies, and thoughts about future work on legislation.

Starting with the above notes I then proceeded to assemble information on the work Ann Whitmyer did in submitting the "Endangered Species Inventory Act of 1981". The act was introduced to the Committee on Environment and Energy, yet it never got out of the committee because there simply was no support for the bill.

On December 14, 1984 Rhoda Love organized a meeting in Eugene. We met with Wendell Wood and Andy Kerr of the ONRC, Sydney Herbert of the Lane County Audubon and Michael Axline of the University of Oregon Law School. We discussed a number of key issues including: the listing process, co-ordination of a plant-animal Endangered Species Act, enforcement policies, lobbying, legislation of other states, and what department might administer a bill. We felt we needed a summary sheet or statement to be used as a basis for rallying support of any bill we hoped to achieve in the near future. Rhoda has agreed to draft a summary. Below is a brief outline of some of the key points we feel should be included.

WHY DOES OREGON NEED AN ENDANGERED SPECIES ACT?

1. Although the Federal ESA was passed in 1973, to date only 3 plant species out of 267 proposed in Oregon have been listed.
2. Candidate and Proposed species are not protected under the existing law.
3. Ecosystems and habitats receive no official protection.
4. At the rate of 1 Oregon species receiving Federal protection every 4 years, how many species face extinction each year?

5. The Federal ESA must be reauthorized every two years. Industry groups such as American Petroleum Institute, American Mining Congress and National Forest Products Association are organizing to seek potentially crippling amendments to the Federal Act during this years reauthorization.

6. Species such as Darlingtonia californica will never receive Federal listing because the F & W Service has changed its status to 3C, "too abundant for listing", yet this species is under pressure in Oregon where it is being dug and sold commercially. Only a state law can protect species which are abundant elsewhere but liable to local extinction in Oregon.

Please send me your comments.

Esther Gruber McEvoy
Corvallis Chapter

Books

Sacred Cows at the Public Trough was reviewed by Rick Brown in the *NFPO Bulletin's* August 1984 issue. It bears another review, for those of you who missed it the first time around, or who remain unconvinced. Grazing and livestock-related habitat destruction on public lands loom as the greatest threats to eastern Oregon's native plants & ecosystems.

Sacred Cows at the Public Trough, by Denzel & Nancy Ferguson, 1983. Maverick Publications, Drawer 5007, Bend, OR 97708. 250 pp. \$8.95.

Here is a book that anyone who cares about the flora of the western United States should read. You will either love it or hate it. If you have ever knelt in a cow pie while trying to photograph a wild flower on federal land, you will love it. If you are a cowboy or rancher or have loved ones who are and who use federal lands, you will hate it.

The book is a thorough denunciation of the western livestock industry and their lackeys in government for their misuse and overgrazing of federal lands. The Fergusons have carefully researched their book and present their point of view in a straightforward but often inflammatory style. "While cowboys have been twirling their lariats and strutting around in their pointy-toed boots, Americans have gone to the moon and launched the computer age. A cow is no longer a big deal." Those words are enough to make a fellow swallow his chew.

The book has sometimes funny cartoons by Ginny Rosenberg, references, and an index. Their sources of information include scientific journals such as

Ecology and Wilson Bulletin; applied journals such as *Journal of Range Management* and *Journal of Wildlife Biology*; government publications; and firsthand observation. They lived and worked at the Malheur Field Station in Harney County for about ten years. They know whereof they speak.

The Fergusons use an historical (some would say hysterical) approach to developing their version of the rape of the western ranges. The book includes chapters on cowboy philosophy; the effect of overgrazing on rangeland, water resources, and wildlife; the introduction and establishment of weeds; the effects of predator control; range improvement; the wastefulness of public subsidies; the charade of multiple use; and a call for change.

Here are some modified excerpts:

The U.S. Treasury spends \$33.6 million more than it collects in a year to support private grazing on public land.

Only 3% of the nation's beef is produced on western public lands. The rest is produced by ranchers on private land, mostly in the eastern U.S.

American beef consumption has declined from a high of 95 pounds per capita in 1976 to 77 pounds in 1982.

In AUMs (the amount of forage to feed a cow & her calf, a horse, or five sheep or goats for a month), 3.1 elk equal one cow.

Malheur Wildlife Refuge: in 1940, 40,000 AUMs, duck nesting success 65%; in 1964, 111,600 AUMs, duck nesting success 24.7%.

A feedlot cow produces 34 cubic feet of manure a year.

In Nevada, 883 miles of riparian habitat are either deteriorated or declining because of livestock grazing.

In 1983 the Forest Service and the BLM took in about \$25 million in grazing receipts, of which about \$9.4 million will go to the U.S. Treasury. Each year Americans spend \$57 million on birdseed. In 1980 100 million Americans spent \$40 billion in outdoor recreation, hunting, fishing, hiking, nature photography, and the like.

Others may wish to interpret the information presented by the Fergusons differently. I would be interested in their rebuttal.

The people I have talked to in government agencies have agreed that the Fergusons are essentially correct. They criticize them for being so intemperate in their choice of words. I haven't had the nerve to ask a rancher what he thought of the book. Read it; it has an important message for those of us who care about the stewardship of public lands and ALL the organisms that live there.

Frank A. Lang
Siskiyou Chapter

ARABIS IN SOUTHWESTERN OREGON: KEYING SPECIES

LINDA ANN VOROBK, EMERALD CHAPTER

In this fourth and final chapter on southwestern Oregon rockcress, I had intended to discuss the evolution within the genus. I decided, instead, to provide you with some tools for keying *Arabis* species. First I will briefly discuss some of the characters used in keying *Arabis*; next I will present parts of a key to Oregon *Arabis*, including those species not found in Hitchcock and Cronquist. My hope is that you will be inspired to learn the species when you encounter them in the field. For those special few who are, as I am, truly excited about the genus, I would be happy to send you a copy of the complete key if you would be kind enough to send me \$2 to cover postage and photocopying. I also would be glad to identify specimens. If collecting specimens, please remember:

1. Follow NPSO guidelines,
2. Learn and avoid collecting the RT&E species (here marked with an * including "Watch List" species), and
3. Collect complete specimens (flowers and fruits, whole plants) and provide complete label information (collector, date, precise locality, habitat, associated species).

At present, I am still at the Department of Botany, University of Texas, Austin, Texas, 78713.

CHARACTERS USED IN KEYING *ARABIS*

BASAL LEAF SHAPE. Three general types of leaf shapes are found in Oregon *Arabis*. A broadly-ovate to oblanceolate or spatulate, usually lobed leaf is found in members of the "true" *Arabis* (basic chromosome number equal to 8). Members of what has been described as the genus *Boschea* (*Arabis* species with a basic chromosome number of 7) have narrowly ovate to oblanceolate, often entire leaves. It should be noted that there is some degree of overlap between these two leaf types. The third leaf shape type, narrowly linear-oblanceolate to linear, is found in *A. cusickii*.

VESTITURE. Three aspects of the indumentum are important: size, type and amount of hairs (trichomes). The size of the trichomes varies from fine, or barely visible with the naked eye, to coarse, or visible as a rough edge on the leaf to the naked eye. Trichomes can be simple and acicular (needle-shaped) to forked, dendritic or stellate. Plants vary from glabrous, to densely pubescent, to hoary (appearing whitish because of a very dense coating of intertwined trichomes).

FLOWERS. Size of the flowers is a useful character for differentiating between *Arabis* species, as shown in this series' Part III. Although flower color is sometimes variable and hard to define, *Arabis* flowers are basically white, pink, or deep pink to purple. Sepals vary in their shape, from saccate to non-saccate, and in their vestiture. In fruiting populations, flowers may be found on secondary branches of plants.

SILIQUES. Mustard fruits are always important for identification of species. *Arabis* siliques vary in position, shape and size. In flowering populations, skeletons of last year's fruiting stems can usually be found.

SEEDS. Although *Arabis* seeds provide very useful characters, they are often difficult to obtain. Unless mature (dry to deliquescent) siliques are found, seed characters can only be extrapolated from the silique size and from immature seeds. Seed position (uniseriate vs. biseriate) can only be determined from mature fruits; seed size is proportional, though less than, silique width; seed wings vary from absent to broad.

Please turn to page 20



Basal leaves

narrow to linear oblanceolate.

Basal leaves ovate to broadly oblanceolate with distinct petiole

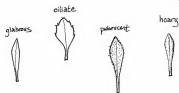


Basal leaves spatulate to

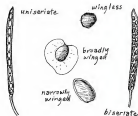
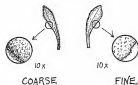
narrowly oblanceolate, narrowing gradually to the petiole



BASAL LEAVES



VESTITURE TYPE



SEEDS

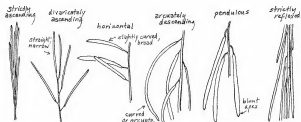


TRICHOME TYPES



FLOWERS

SEPAL SHAPE



SILIQUES

ARABIS KOEHLERI AND ARABIS BREWERI

Plants numerous stemmed perennials, stems mostly less than 3 dm tall, glabrous or densely to sparsely pubescent below; flowers pink to purple, petals 7-10 mm long; siliques ascending to spreading, arcuate. Plants of sw OR w of the Cascades and s into nw CA.

1a. Caudex woody, much branched and covered with peg-like leaf bases; stems entirely glabrous to sparsely pubescent below with appressed trichomes; basal leaves sparsely to densely pubescent with fine dendritic hairs; cauline leaves and sepals glabrous or nearly so; pedicels glabrous; flowers bluish-purple. Shrubby rockcress.

A. koehleri Howell*

a1. Siliques sessile, only slightly curved; cauline leaves few. Known only from rocky hillsides near Roseburg, Oregon.

var. *koehleri**

a2. Siliques shortly stipitate, strongly curved; cauline leaves numerous, imbricated. Plants mostly of serpentine soils; Josephine and Curry Co.s, OR s to nw California.

var. *stipitata* Rollins*

1b. Caudex much branched, but forming caespitose mats and not covered with peg-like leaf bases; stems hirsute below with simple or rarely forked, spreading hairs; hairs of basal leaves coarse; cauline leaves and sepals pubescent; pedicels pubescent to rarely glabrous; flowers pink to reddish-purple. Plants not of serpentine soils. Rocky ridgetops and talus slopes of low to montane elevations; foothills of Cascades e of the Medford-Ashland valley, s to California. Brewer's rockcress.

A. breweri Watson

ARABIS SUBPINNATIFIDA

The closest relative to *A. subpinnatifida* is *A. puberula*. Both species have basal leaves of vegetative and flowering shoots of two forms (dimorphic), with a dense coating of minute stellate or dendritic hairs (hoary). They also have pendulous, straight to slightly curved siliques, 2-3.5 mm broad.

1a. Cauline leaves entire or the lower irregularly toothed, not subpinnatifid; sepals green with a narrow scarious margin, not sacate; siliques blunt at apex. Foothills to middle elevations e of Cascades; WA s to CA, e to ID. Hoary rockcress.

A. puberula Nuttall (in H&C)

1b. Cauline leaves subpinnatifid to irregularly dentate; sepals purplish with prominent scarious margins, sacate; siliques acuminate. Serpentine soils; sw OR s to NW CA. Ashy rockcress.

A. subpinnatifida Watson

ARABIS RECTISSIMA

The most similar species to *A. rectissima* is *A. holboellii*, especially var. *retrofracta*. Both have strictly reflexed, straight, narrow siliques and densely pubescent basal leaves.

1a. Margins of basal leaves always ciliate with large, acicular hairs, surfaces hirsute with simple and forked hairs; fruiting racemes long, 1-4 dm. Open pine forests and edges of mountain meadows; Cascades in Klamath Co., OR s to Sierras in CA. Bristly-leaved rockcress.

A. rectissima Greene

1b. Basal leaves not ciliate with large acicular trichomes, surfaces densely pubescent with stellate hairs; fruiting racemes usually less than 1-4 dm long. Sagebrush and ponderosa pine slopes to subalpine and alpine meadows; AK s to CA, e to Rockies and e Canada. Holboell's rockcress.

A. holboellii Hornem (in H&C)

ABBREVIATIONS USED IN THE KEYS

AK - Alaska
CA - California
CRG - Columbia River Gorge
H&C - Hitchcock and Cronquist

Flora of the Pacific Northwest

ID - Idaho
NV - Nevada
OR - Oregon
SRC - Snake River Canyon
WA - Washington

n - north
s - south
e - east
w - west

ne - northeast
sw - southwest
etc.



Basal leaves of
vegetative and flowering shoots
dimorphic



THE "PURPLE FLOWERED *ARABIS*" AND THEIR RELATIVES

Siliques 2-2.5 mm broad, not arcuate, divaricately ascending, never strictly erect; basal leaves with a broad blade narrowing to a distinct petiole, obovate to broadly oblanceolate, often obtuse and rounded at the apex, dentate to lobed (entire in *A. nuttallii*), usually forming a flat rosette at the base of the stems; cauline leaves not auriculate or sagittate.

1a. Plants pubescent with forked to stellate hairs (rarely glabrous); basal leaves usually more than 3 cm long, often thin, leaf surfaces dull

2a. Flowers white, small; petals 6-8 mm long. Wet banks and coniferous woods; SRC, WA to wc ID, in Oregon known only from Hat Point. Cross-haired rockcress.

A. cruciata Const. & Rollins (in H&C)

2b. Flowers pink to purple, large; petals 12-20 mm long. Plants of sw OR and nw CA

3a. Basal leaves with coarse, 2-4-rayed, bulbous-based hairs, sometimes with a few simple or fine dendritic hairs mixed in, or sometimes nearly glabrous but then ciliate with a few 2-4-rayed, bulbous-based hairs; stems mostly 1.5-3.5 dm tall, coarsely hirsute with spreading hairs or rarely glabrous. Rocky ridges, foothills to montane elevations; e of the Madford-Ashland valley, and sw of Ashland s into nw CA. Oregon rockcress.

A. oreana Rollins*

3b. Basal leaves with fine, 3-5-rayed, non-bulbous-based hairs, uniformly pubescent; stems mostly 3-6 dm tall, uniformly pubescent with appressed, several-rayed hairs. Banks of the Rogue R., OR and Klamath R., CA. Rogue R. rockcress. (Included in *A. oreana* by Goforth.)

A. modesta Rollins*

1b. Plants glabrous or pubescent with simple to forked hairs; basal leaves often less than 3 cm long, often thickish, leaf surfaces often shiny

4a. Petals usually less than 10 mm long, white or tinged with pink. Plants not on serpentine, rather of n or a OR

5a. Plants entirely glabrous; stems 0.5-1.5 dm tall; basal leaves thickish; seeds 1.5 mm long, winged all the way around. High elevations; in OR known only from the Blue Mts. In Baker Co.; disjunct from the Sierras. Davidson's rockcress.

A. davidsonii Greene*

5b. Plants with some simple to forked hairs, or if glabrous then stems taller and plants of the n Cascades in OR, or seeds wingless and plants of e OR

6a. Basal leaves glabrous to ciliate with simple to forked hairs, thickish; seeds 1.5-2 mm long, winged on ends only. Alpine and subalpine slopes and ridges in the Olympic Mtns., Cascades in WA and n OR, and in the CRG. Fork-haired, Cascade, or CRG rockcress.

A. fuscata Watson* (in H&C)

6b. Basal leaves glabrous to strongly ciliate and hirsute below with long simple to forked hairs, thin to coriaceous; seeds about 1 mm long, wingless. Moist flats, often sheltered by shrubs. Foothills to montane; far e WA s to e OR and NV, e to Rockies. Nuttall's rockcress.

A. nuttallii Robinson (in H&C)

4b. Petals pink to purple, 12-20 mm. Plants of serpentine soils; sw OR to nw CA

7a. Seeds wingless, plants glabrous throughout, plants mostly more than 1.5 dm tall. High elevations in Josephine and Curry Cos., OR, and Siskiyou Co., CA. Serpentine rockcress. (Included in *A. macdonaldiana* by Goforth.)

A. serpentinicola Rollins*

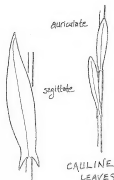
7b. Seeds winged at least distally; plants with sparse to dense pubescence; stems short to tall

8a. Plants pubescent with large, often bulbous-based, simple to forked hairs. Dry gravelly ground; Douglas, Curry and Josephine Cos., OR s to Del Norte Co., CA. Waldo rockcress. (Included in *A. macdonaldiana* as subsp. *aculeolata* by Goforth.)

A. aculeolata Greene*

8b. Plants glabrous except for a few marginal hairs on the basal leaves. Dry gravelly ground, extreme se Curry Co., OR s to nw CA. Macdonald's rockcress. (*A. macdonaldiana* subsp. *macdonaldiana* according to Goforth.)

A. macdonaldiana Eastwood*



(Note: Duane Goforth is a Master's student at Humboldt State University, who has studied the "Purple Flowered *Arabis*" and their relatives. My reference to his revised classification comes from a key that he sent to me in 1982.)

arum which is native to the Old World. The mashed spadix material was placed in small flasks, provided with substrate and gently agitated while we took readings of oxygen consumption. In this way, we verified what Dr. Meuse told us Otto Warburg, the great German physiologist once said, that "Die Zelle ist kein Ofen" (a cell is not a stove). I wasn't at all surprised to find the arums particularly well covered in this book!

In closing, I want to recommend The Sex Life of Flowers to every Bulletin reader. You'll love it and so will your children. Your friends will marvel at the photographs. The book is readable as well as gorgeous. Furthermore, The Sex Life of Flowers has an important message which is this: Everyone loves flowers, but loving them is not enough. Unless we become aware of the various bees, wasps, ants, butterflies, moths, birds, beetles, flies and gnats which carry pollen from one blossom to another, and unless we work hard to preserve these members of our ecosystems along with the flowers, trees and grasses, unless we fight for preservation of entire communities, we can never be certain that indeed we will have flowers forever.

* * *

Welcome New Members

Corvallis Chapter

Ginger V. King
Sarah Green
Uto & Virve Kugenag

Emerald Chapter

Ann Tattersall
Nancy Holzhauser

Portland Chapter

De-Ann M. Pillers
Patrick C. Willis
Peter James Kendall
Julia Ferreira
David & Jody Blair

Stekiyon Chapter

Anita Seda
Loretta Hague
Margaret Sherrill
Jan Larson
Richard Helliwell

Willamette Valley Chapter

Alice Brooks Gastineau

NEW NPSO NOTECARDS ARE HERE !

NPSO CAMPAIGNS GET RESULTS FROM BLM

Excerpts from a letter to Stu Garrett from Paul Vetterick, Associate State Director of the Oregon State Office, BLM:

"Thank you for your letter of Nov. 9, 1984 expressing your concern for the status of Malheur Wire Lettuce (*Stephanomeria malheurenensis*). The Bureau is also concerned about the apparent low population level of this listed species.

The Bureau became aware of the special nature of the species in the early 1970's. In 1975, a 160-acre plot was fenced to exclude livestock. This was an effort to reduce possible impact from livestock grazing and recognized the need to do something to help keep a healthy population of the species. We have documented extreme fluctuations in the numbers of plants since inventories were instituted. However, at the present time, it appears that population numbers are at a seriously low level.

Monitoring studies conducted by BLM during 1984 only confirmed two live plants. This extremely low population of plants will obviously reduce the seed production for the next growing season.

Causes for the apparent low population level are only conjecture at this time and include competition from other species (especially cheatgrass), abnormally cool wet spring weather, rodent use and some other unknown environmental factor(s).

At this time, no specific research studies are being conducted on the survival of the plant. However, the draft recovery plan for the species should be available sometime in January 1985. Dr. Robert Parenti of the U.S. Fish & Wildlife Service is responsible for preparing the document and may be able to answer questions regarding suspected reasons for the population decline...

For your information, our Burns District office has been authorized a new botanist position this year. This new position is being created, in part, due to the concerns of people like yourself, the Native Plant Society, and our own internal concerns for accomplishing a high quality botanical program. I am confident that you will find that this action will increase the attention and emphasis placed on BLM's botanical program in eastern Oregon..."

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BULLETIN

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11505 SW Summerville, Portland, OR, 97219; 636-4112
The NPSO Bulletin is published monthly. Copy is due
by the 10th of the month, and should be sent to the
editor. News, articles, photos, drawings, and non-
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MEMBERSHIP

Membership Chair Mary Falconer
1920 Engel Ave. NW, Salem, OR, 97304
Membership in the Native Plant Society of Oregon is
open to all. Membership applications, from this page
or from chapter presidents, should be sent to the
membership chair. Change of address, including old
address & zip code, should also be sent to the
membership chair.

*** IMPORTANT ADDRESSES ***

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221-3388.
Senator Bob Packwood, Senate Office Building,
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Congressman Bob Smith, House Office Building,
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Congressman Jim Weaver, House Office Building,
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399-5756 or (800) 652-7889.
Governor Victor Atiyeh, State Capitol, Salem,
OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Simon, Regional Forester, U.S. Forest Ser-
vice, P.O. Box 3623, Portland, OR 97208; (503)
221-2877.
William G. Leavelle, State Director, Bureau of
Land Management, P.O. Box 2965, Portland, OR 97208;
(503) 231-6273.
Richard J. Myshek, Regional Director, Fish and
Wildlife Service, 500 NE Multnomah, Suite 1692,
Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director,
National Park Service, Westin Building, Room 1820,
2001 6th Avenue, Seattle, Washington 98121; (206)
442-0170.

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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 3

March 1985

CHAPTER NEWS

Blue Mountain

12 March, Tue. MEETING, 7:30 p.m., P.P.L. Building, SE 2nd & Dorion, Pendleton. Rachel Sines will show slides of EAGLE CAP ALPINE FLORA.

Corvallis

11 March, Mon. MEETING, 7:30 p.m., Kidder Hall, Room 2021 (2 blocks east of Cordley Hall, on Campus Way), Oregon State University campus. RARE PLANTS: PROBLEMS AND PROMISE IN THE WILLAMETTE VALLEY. This video tape will be shown on a large screen at the Media Center. The upcoming field-trip season will be open for discussion, so come with ideas.

Emerald

11 March, Mon. MEETING, 7:15 p.m., north craft building of Anazon Community Center. Virginia (Shorty) Boucher will speak on her ECOLOGICAL STUDY OF CALIFORNIA POPPIES (Eschscholzia californica).

High Desert

New officers for the High Desert Chapter are Stuart Garrett, President; and Barbara Robinson, Secretary-Treasurer.

26 March, Tue. MEETING, 7:30 p.m., COCC, Room 237 Modoc. Stosh Thompson will give a program on NEW APPROACHES TO RANGE MANAGEMENT & GRAZING PRACTICES.

Mid Columbia

6 March, Wed. MEETING, 7:30 p.m., Mosier School.

North Coast

For information about activities of this new chapter, contact Richard Smith, 842-4324. Welcome to the Native Plant Society of Oregon!

Portland

The Portland Chapter nominating committee has presented the following slate of officers: President, Stanley G. Jewett; 1st Vice President, Mary B. Mason; 2nd Vice President, Lois M. Kemp; Secretary, Rosemary R. Kenney; Treasurer, Rhoda J. Lewis. Election of officers will be held on Tuesday, April 9, at the regular chapter meeting. Nominations from the floor may also be made at this time. The term of office is one year, effective the first day of May.

- 2 March, Sat. WORKSHOP, 10:00 a.m., First United Methodist Church, 1838 SW Jefferson, Portland. UNDERSTANDING THE PRONUNCIATION OF BOTANICAL LATIN, with Father Martin Thielens.
- 12 March, Tue. MEETING, 7:00 p.m., First United Methodist Church. OREGON BULBS AND THEIR RELATIVES, by Molly Grothaus.

The 1986 Field Trip Season is here!! The month we've all been waiting for has finally come. Unless otherwise stated, our meeting place will be the K-Mart at NE 182nd & Sandy Blvd. (exit I-84 at 182nd northbound). Meet at the south end of the parking lot. Bring lunch, liquids, and all-weather clothing. If there are any questions about a field trip, please call the leader or Doris Ashby, 846-8977.

- 16 March, Sat. THE NORTH BANK. Our first trip to see the early blooming flowers in Washington at the east end of the Gorge. Meet at the K-Mart at 8 a.m. or join our leader, Keith Chamberlain (478-3314) at the Hood River Inn at 9:00 a.m.
- 23 March, Sat. FOREST PARK. A five mile loop and a chance to have mosses, lichens, and liverworts as well as flowers identified. Meet at the Audubon House (5151 NW Cornell Road) at 9:30 a.m. Leader: Glenn Walthall, 644-0745.
- 30 March, Sat. SHERAR BRIDGE AREA (weather permitting). Here is an opportunity to see and identify early spring flowers in the Tygh Valley area. We will leave the K-Mart at 7:30 a.m. and meet our leader, Keith Chamberlain (478-3314) at 9:00 a.m. at the Portage Inn in The Dalles.
- 6 April, Sat. McCORD CREEK AREA. Enjoy flowers growing in the forest, near waterfalls, on talus slopes, and on rocky cliffs. Meet at the K-Mart at 8:30 a.m. Leader: Dave Dobak, 643-2213.

Siskiyou

- 14 March, Thu. MEETING, 7:30 p.m., Room 171, SOSCI Science Building, Ashland. Tom Atzet, Area Ecologist with the Forest Service, will speak on WHY THE SISKIYOU ARE SO FLORISTICALLY DIVERSE.

Willamette Valley

- 18 March, Mon. MEETING, 7:30 p.m., Carrier Room, First United Methodist Church, corner of Church & State, Salem. SOME SOUTHWESTERN AUSTRALIAN WILDFLOWERS UNIQUE TO US, a multi-projector presentation by Fred Drager of Portland. Mr. Drager is a seasoned traveler and photographer of native plants in many countries of the world.

* * * WELCOME TO OUR NEW CHAPTER * * *

NPSO has a new chapter!! The North Coast Chapter has just been formed, with twelve charter members:

Richard Smith	Jaylen Jones
Paul Levesque	Shirley Dallman
Richard L. Apple	Duane L. Young
Helen E. Cheek	Mrs. Ingeborg Day
Daphne Peters	Mignon Johanson
Sig Syversen	Sylvia Sullivan

Any of NPSO's coastal members who would like to transfer to the new chapter may contact Richard Smith, 1605 Third St., Tillamook, OR 97141; phone 842-4324.

* * * * *

SCHOLARSHIP DEADLINE NEAR

Deadline is April 1 for applications for the Jean Davis Memorial Award. This scholarship of \$1000 is given each year to a student in an Oregon college, with his or her major study in plant ecology or systematics. For rules of application, see page ten of the January 1985 NPSO Bulletin. All application materials should be sent to Mary Falconer, Committee Chairman, 1920 Engel Ave. NW, Salem, OR 97304. The award will be made by May 1.

\$ \$ \$

JOB OPENINGS AT MALHEUR FIELD STATION

Full time & part time seasonal cooking positions are available from late March to October 31. Room & board provided during employment. Duties include meal planning & preparation, serving, & clean-up. Food service experience helpful but not essential for all positions. Applications for shorter periods of time also welcome. Send resume & references to Directors, Malheur Field Station, P.O. Box 260E, Princeton, OR 97721; phone (503) 493-2629. *We are an equal opportunity employer.*

A A A A A

WESTERN CONFERENCE CANCELED

It is with deep regret I must inform you that the NPSO Conference of Western Native Plant Societies, scheduled to be held in La Grande, Oregon on August 3-5 of this year, has been canceled because of Oregon State Board of Higher Education policy regarding the use of dormitory rooms. In essence, "dormitory space is available for participants of conferences and seminars if the conference is either sponsored or co-sponsored by the Division of Continuing Education, Regional Services Institute, or a student-related club; and if the participants have the opportunity to receive college credit for coursework completed". Since we did not fulfill any of these requirements, we could not use dormitory space at Eastern Oregon State College. There is no other suitable meeting place available in northeastern Oregon.

Much work had already gone into making this a super conference, and I thank Mike Fahay, Program Chair, and Shep Wilson, Brochure Chair, for their efforts and dedication toward making this a memorable affair.

Ruth Hansen
(Disappointed Chairman)

GRAZING ON PUBLIC LANDS

This highly controversial topic will be discussed by Denzel Ferguson, author (with Nancy Ferguson) of Sacred Cows at the Public Trough, and by noted ranchers and range specialists. The panel discussion, co-sponsored by The Nature Conservancy and the Western Forestry Center, will be held at WFC's Forest Hall, Tuesday, March 12, 7:30 p.m. Admission is free and open to the public.

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GET YOUR T-SHIRT NOW!!!
(Limited Edition Designer T-Shirts)

You can still buy one of the new NPSO t-shirts from the Emerald Chapter for only \$7.00 plus \$1.00 postage (check first with your local chapter to avoid postage; they are likely to have some t-shirts for sale). Three designs are available: Trillium ovatum (green on yellow shirt) and Opuntia polyacantha (black on silver-grey shirt) by Julie Kierstead; and Darlingtonia californica (black on plum-lavender shirt) by Linda Vorobik. The heading "Native Plant Society of Oregon" appears above each drawing. The t-shirts come in men's sizes S, M, & L, are short sleeved, preshrunk, and 100% cotton. When ordering, please indicate size and design, and a second choice of design if there is an acceptable one. Send orders to: Evelyn Everett, 4135 Alder St., Eugene, OR 97405; phone 345-1746.

FLOWERS FOREVER

by Rhoda Love

Representative Carl Hosticka
Oregon House of Representatives
State Capitol
Salem, Oregon 97310

Dear Carl,

Did you know that Oregon has no state law to protect rare and endangered plant and animal species here?

According to Julie R. Kierstead of the Berry Botanic Garden, four plant species face extinction in Oregon each year! Oregon botanists have identified 27 plant species which are "endangered throughout their range" and likely to become extinct in the next 15 years. An additional 70 species are considered threatened and likely to be extinct within 30 years. At least thirty Oregon plant species HAVE NOT BEEN SEEN ALIVE SINCE 1960 and are considered extinct today.

There is a Federal Endangered Species Act but the Federal listing process has proved too slow and cumbersome to prevent extinction of Oregon species. Although the Federal ESA was passed in 1973, and 132 Oregon plant species are candidates, ONLY 3 OREGON PLANTS HAVE SO FAR BEEN LISTED.

Other states have laws to protect their rare plants and animals from extinction. California, Arizona and Nevada have excellent laws to protect their desert species and the following states have laws which protect rare and endangered plants and animals: Hawaii, Illinois, Iowa,

Maryland, Michigan, Nebraska, North Carolina, Ohio, Rhode Island and Wisconsin. Oregon, usually considered a leader in environmental issues, is now lagging woefully behind other states in protection of her plant and animal heritage.

This year the Native Plant Society of Oregon and other conservation organizations will be sending legislators information about endangered species. Please lend your support to our efforts to prevent extinction of Oregon's rare plants and animals.

Yours most sincerely,

Rhoda Love

Dr. Rhoda M. Love
Conservation Chair
Native Plant Society of Oregon

The above is a copy of a letter I am sending to my state representative, Carl Hosticka. Use one of our NPSO notecards to write a similar letter to your state senator and representative. Describe your favorite rare plant or animal and ask for support for an ESA for Oregon. Flowers Forever! R.L.

Ranunculus recurvatus
Obscure buttercup; still found
at a few sites in Washington,
but gone from Oregon
drawing by Julie Kierstead



INTRODUCING A BILL

The process of introducing a bill for protection of our endangered plants involves alot of thought and careful homework about the issues. By the time you read this article the deadline for introducing measures will have been passed. Even though there are exceptions to those deadlines I realistically feel that it will be at least a year or two before we can conceivably feel comfortable with a bill for protecting our endangered flora.

Legal protection for endangered species may require new legislation. Here from the publication entitled, "Oregon's Legislature and Legislative Process" (which can be obtained by writing the Legislative Administration Committee, State Capitol, Salem, Oregon 97310), are steps for introducing a bill:

"All bills start as ideas. A legislator, with information from constituents or lobbyists perceives a need for change in statute. The legislator requests that a bill be drafted to deal with the issue. Attorneys on the Legislative Counsel usually draft the bill.

If after reviewing the draft, the legislator decides to introduce it, the bill is delivered to the House or Senate desk. An individual legislator, group of legislators or a legislative committee may introduce a bill and citizens and groups may request introduction if the bill is introduced at the request of a citizen or group, the requestor must be identified.

The Oregon Revised Statutes provide a mechanism for filing of measures before the convening of the session by legislators, the Governor, state agencies and legislative interim committees. Pre-filing means that the bill is assigned a number and processing and printing may begin prior to convening.

A bill may be introduced in either body. However, revenue raising measures must originate in the House of Representatives.

The Chief Clerk or Secretary assigns a number to the bill and sends it to the Legislative Counsel Engrossed and Enrolled Bill Section for a check of proper style and form. After the check, it is sent to the State Printer for printing."

In gathering information for legislation I would like to encourage you to jot down ideas, thoughts, and even answers to some of the questions posed in the first article on page 16 of the February issue of the NPSD bulletin. I am deeply appreciative of the responses that we have received so far.

SAVING SPECIES MEANS SAVING HABITAT

" All available evidence suggests that the rate of extinction of many species of plants and animals has increased significantly in the postindustrial era. In many cases the process of extinction has been associated with an increase in man's ability to alter natural habitats for his own devices. The loss of habitat for many species is universally cited as the major cause for the extinction of species worldwide."

H.R. REP. NO. 1625, 95th Cong., 2nd Sess. 5 (1978), reprinted in [1978] U.S. CODE Cong. & AD. NEWS 9453, 9455.

Recommended reading: McMahan, Linda. 1980. Legal protection for rare plants. American University Law Review 29(3):515-569.

Esther Gruber McEvoy
Corvallis Chapter



**BUY AND USE NEW
NPSD NOTECARDS
ALL PROCEEDS GO FOR
SURVEYS OF OREGON
R & E PLANTS
USE A CARD TO WRITE
TO YOUR STATE
REPRESENTATIVE
ASK FOR AN OREGON
ENDANGERED SPECIES ACT
IN 1985
WE NEED PROTECTION
FOR PLANTS, ANIMALS
& HABITATS NOW!**



What Is Acid Rain?

Acid rain is often called the #1 environmental threat to North America. It is silently, gradually destroying the life in thousands of lakes and streams. It kills fish, damages forests and crops, and leaches toxic chemicals into public drinking water supplies. The National Academy of Sciences estimates that acid rain costs the U.S. more than \$5 billion in damages every year.

What Causes Acid Rain?

The primary cause of acid rain is sulfur dioxide pollution from coal-fired electrical power plants. Sulfur dioxide emissions have doubled over the past 30 years, and further increases are projected. These pollutants combine with moisture in the atmosphere to form sulfuric acid in the rain, snow, and fog. Industrial boilers, factories, smelters, and automobiles also add to the problem.

Where Does Acid Rain Fall?

Acid rain is no longer limited to one region. It threatens the Northeast, the South, the Great Lakes region, Texas, the Rocky Mountains, and the far West. Rain in much of the eastern U.S. and areas in the West now averages 30 to 40 times more acidic than unpolluted rain.

Why Don't We Have Laws to Control Acid Rain?

All efforts to enact pollution controls to stop acid rain have been blocked by an alliance of the Reagan Administration, a few members of Congress, and powerful utility and coal company interests.

What You Can Do

Please fill out a **STOP ACID RAIN** postcard today. Signing and getting friends to sign is one step in mobilizing Americans to let our nation's leaders know we want action to stop acid rain now.

This effort is being sponsored by the National Clean Air Coalition, the Sierra Club, the National Audubon Society, the League of Women Voters of the U.S., the Izaak Walton League of America, the National Wildlife Federation, the National Parks and Conservation Assoc., and many other national and local groups.

Together we can STOP ACID RAIN

National Clean Air Coalition

530 7th St. SE, Washington, D.C. 20003
(202) 543-8200



- 1) Membership Chair Mary Falconer reported receiving a written request for recognition as a chapter from a group of eleven people from the coastal region extending from Newport to Astoria. The name chosen is NORTH COAST CHAPTER OF THE NATIVE PLANT SOCIETY OF OREGON. Membership applications and payment of dues were included. The Board voted to accept their application and is very glad to welcome our newest chapter.

In order to eliminate the need for the double copies of the membership application form, a decision was made to provide each chapter with quarterly print-outs of its membership.

- 2) Walker Creek Wetlands: a presentation was made on the area where the City of McMinnville plans to build a dam, which would flood wetlands known to harbor *Sidalcea nelsoniana*, a candidate for listing under the Endangered Species Act. Resolutions stating our concerns were written and approved by the Board. Copies of the resolutions are being sent to the Salem District of the Bureau of Land Management, which administers the land in question, and to Oregon's Senators and Representatives. The full text of the resolutions is printed in this Bulletin.
- 3) Flora of Three Sisters Wilderness: Dave Wagner of the University of Oregon Herbarium is compiling a flora of this area in the central Oregon Cascades. He needs financial help to purchase a computer, as well as volunteer help in the field. The Board voted to contribute \$500.
- 4) Wildflower Seed Collecting: a request was made that we collect seed of specified native flowering plants to be sold through Territorial Seed Co. of Lorane, Oregon. Esther McEvoy was appointed Chair of a committee to decide whether or not NPSO should participate. Please contact her with opinions and offers of help; 3290 SW Williamette, Corvallis, OR 97333, 754-0893. Seed collecting would start in May.
- 5) Wildflower poster: Chair Alan Curtis introduced Jay W. Winer, who presented his nearly completed poster original. The Board was very favorably impressed. Sale price of the poster will be set after all costs are computed; probably at the next Board meeting.
- 6) Bulletin editor Julie Kierstead reported that indices for the 1983 and 1984 Bulletin issues will be ready for distribution at this year's Annual Meeting. A sheet of Guidelines for Contributors to the Bulletin is now available from Chapter presidents or from the Bulletin editor.
- 7) Rare & Endangered Plant Committee, headed by Jean Siddall, has met to decide which activities NPSO should undertake this field season. Most chapters felt they needed a second year for field checking Review list species. Some progress is also being made on an agreement for information exchange with The Nature Conservancy.

Continued on next page

WETLAND RESOLUTIONS PASSED

Sparked by recent controversy over the proposed Walker Creek Water Supply Project (planned by the McMinnville Water & Light Department, apparently endorsed by the BLM's Salem District, and opposed by a number of conservation groups including NPSO); the NPSO Board of Directors at its January 19 meeting passed two resolutions:

Resolution 1

The Board of Directors of the Native Plant Society of Oregon affirms its support of the protection of wetlands, riparian, and estuarial habitats.

The Board of Directors of the Native Plant Society believes that wetlands, riparian, and estuarial habitats in the State of Oregon are inadequately protected and that those which have unique and uncommon characteristics should be withdrawn from development and managed for protection of their plant communities and wildlife.

Resolution 2

*The Board of Directors of the Native Plant Society of Oregon endorses the position that the presence of *Sidalcea nelsoniana* at the Walker Creek Wetland in the Oregon Coast Range west of the City of McMinnville indicates the potential exceptional character of the wetland habitat. We urge the Bureau of Land Management to document thoroughly the botanical resources of the wetland using an ecosystem approach to the plant communities. The decision making process cannot proceed without knowledge of the types of habitats represented in the wetland.*

Copies of the resolutions were sent to William Leavell, state director of the BLM, as well as to the Salem BLM District and to Oregon's Senators and Representatives. A reply has been received from Paul Vetterick, associate state director of the BLM (see box at right).

February 6, 1985

Ms. Jeanne Huffstutter, Secretary
Native Plant Society of Oregon
9525 SW 12th Drive
Portland, OR 97219

Dear Ms. Huffstutter:

Thank you for your letter of January 24, 1985, enclosing a copy of the resolutions passed at the January 19 meeting of the Society's Board of Directors.

The Bureau of Land Management recognizes the importance of wetlands to natural processes. That is why we make special efforts to avoid disturbance to existing wetlands or to mitigate their loss, if avoidance is not possible.

The reported discovery of *Sidalcea nelsoniana* at the site of the proposed Walker Creek Water Supply Project has resulted in the delay of the decision on the right-of-way application. Several botanical studies are to be made over the next few years by the applicant and BLM to evaluate the status of the plant and to determine its potential for propagation. A copy of the scope of work for the botanical studies and the memorandum of agreement recently executed to implement the studies are enclosed for your reference.

The decision on the right-of-way application will be made by the Yamhill Area Manager. His name is Richard Prather and you can reach him at 399-5668. Please feel free to call him for additional information or concerns the Society may have.

Sincerely,
/s/
Paul M. Vetterick
Associate State Director

Continued from page 30

- 8) Wildflower Show Guidelines: the committee presented three papers--1) Guidelines for Wildflower Shows; 2) NPSO Guidelines and Ethical Code, with a proposed change; 3) An example of a brochure to be used in conjunction with wildflower shows. Some amendments were offered by the Board and then the three items were approved, after which the committee was heartily thanked and discharged.
- 9) Legislative report by Esther McEvoy, briefing us on her work for this year's session in Salem (her report was published in the Feb. 1985 issue of the Bulletin).
- 10) Conservation committee report: Rhoda Love reports

that an effective committee is developing, but not all chapters are represented as yet. Anyone interested in conservation issues in general, or in a specific issue, is invited to contact Rhoda at 393 Fulvue Dr., Eugene, OR 97405; 345-6241.

- 11) Desert wilderness study areas: Committee Chair Barbara Fox reported that a group has formed and has set some goals. The group will be organizing field trips into several WSAs this summer for the purpose of documenting botanical resources and increasing public awareness of the process.

Jeanne Huffstutter
State Secretary, NPSO

NPSO Guidelines for Wildflower Shows

BOARD ADOPTS SHOW GUIDELINES

At its meeting in Salem on January 19th, the NPSO State Board unanimously accepted the report and recommendations of the Wildflower Show Committee. Chaired by Mike Fahey, the committee proposed a minor change in Part IV, Wildflower Shows, of the NPSO Guidelines and Ethical Code, wrote guidelines for Wildflower shows, and created an informational brochure available to chapters who subscribe to the flower show guidelines.

Basically, the guidelines indicate ways in which a chapter can itself provide a model of good judgment and conservation in the study, enjoyment, and use of native plants. It asks each chapter which sponsors or participates in sponsoring a wildflower/native plant show to provide a written statement to the NPSO State Secretary of how it will implement the nine guidelines. In return, the State NPSO will provide free of charge to the chapter 500 copies of the brochure.

The brochure, designed to inform show visitors about native plants, their importance, and the problems they face, also contains information about NPSO and how to join. Illustrated by Linda Vorobik and Julie Kierstead, the brochure provides ample space on its cover for a chapter's own information. Dan Luoma and Mariana Bornholdt cooperated in developing the brochure. Rhoda Love is responsible for seeing it through final layout and printing.

So that chapters who are interested can get started, the revised Guidelines and Ethical Code and Guidelines for Wildflower Shows are printed here. Statements are due annually. This year's should be sent to Jeanne Huffstutter, Secretary, 9525 SW 12th Dr., Portland, OR 97219. Remember to send them at least four weeks in advance of your show if you want the brochures.



Wildflower shows should make maximum use of their educational potential, as the purpose of these shows is to encourage the use of good judgement by the public in the study, enjoyment, and use of native plants.

1. *Inform the public of the goals of NPSO. Explain the guidelines your chapter follows in studying, enjoying, and using native plants, including guidelines followed in collecting for the show.*
2. *Use all other educational options (slides, art work, publications, herbarium collections, news media, et al.), particularly where inclusion of rare plants in the show is desired.*
3. *Present information about the importance of native plants, pointing out that the State of Oregon has made no effort to protect endangered plants by law.*
4. *Provide all collectors for the show a copy of the NPSO Guidelines and Ethical Code and review the applicable sections with them.*
5. *Each chapter sponsoring a wildflower show should develop a list of plants not to be collected, based on specific criteria for local conditions, using the Oregon Rare & Endangered Plant Project and Oregon Natural Heritage Data Base lists as guides.*
6. *Accompany each sensitive plant displayed with an explanation of the conditions that are causes of concern for that species.*
7. *Present the public with information on the problems caused by commercial digging and collecting of wild plants. Detail specific local cases if known. Any plants sold not to be collected from the wild.*
8. *Remind show personnel that revealing plant locations may lead to the destruction of entire populations of sensitive plants.*
9. *Extend the educational "life" of display materials after the show by donating them to schools, libraries, or to other constructive uses.*
10. *Chapters providing a written statement to the NPSO State Secretary of how they will implement the above guidelines each year may order free of charge up to 500 copies of the State NPSO Wildflower Show brochure to distribute to show visitors. Allow sufficient time for delivery, at least four weeks.*

Native Plant Society of Oregon

GUIDELINES & ETHICAL CODE

GENERAL GUIDELINE: THINK TWICE.

USE DISCRETION. A PLANT IN PLACE IS WORTH TWO IN THE HAND. LOVE THY FLORA.

I. CHAPTER GUIDELINES

- 1) Know your rare, threatened, & endangered species. Know your fragile environments & unique biotic communities.
- 2) Be alert to threats to native plants & their habitats. Appoint watchdog committees to keep aware of these threats & inform the chapter.
- 3) Take action to protect native plants. Work with all groups & the general public to protect native plants & their habitats. Be prepared to salvage plants where they are threatened by outright destruction. Help eradicate particularly aggressive & successful exotic plants that threaten native plants. Take responsible outings.
- 4) Educate your members & the public about native plants, & encourage them to use good judgement in the study, enjoyment, & use of native plants.
- 5) Encourage your members to grow native plants only from seeds or cuttings.

II. OUT THERE AMONG THE PLANTS

- 1) Outings for whatever purpose must never endanger a plant population. Encourage nondestructive modes of learning & enjoyment: photography, artwork, scientific description, aesthetic prose & poetry, & so on.
- 2) On group outings (field trips, conservation activities, class field studies) group leaders must take responsibility for protecting native plants from the activities of the group. All participants should understand the goal of plant protection, the purpose of the outing, & the means by which they can make the least impact on plants & the natural habitat.
- 3) Know where endangered species are growing & plan outings with this knowledge in mind.
- 4) Respect private & public property. Do not trespass. Know the regulations for use of the land & natural resources--public or private--your group is entering.
- 5) Respect the habitat as a whole. Avoid disturbing wildlife, such as nesting birds & nesting hornets.
- 6) Be sensitive to the human foot as a threat to plants. Visits to fragile environments should be carefully planned. Students should be given adequate direction by their instructor, & excessive collecting should be discouraged. Better one person enter a fragile area to identify a plant than the whole group.
- 7) Collecting should be considered only when identification cannot be made in the field or when it will contribute significantly to educational or scientific objectives. Collecting for whatever purpose should be done as inconspicuously as possible. Casual observers

may not understand the reasons for collecting & may feel license to do likewise.

- 8) Collecting must never endanger a plant population. Collect seeds or cuttings in preference to whole plants. Do not collect underground parts except for identification purposes. Avoid excessive collecting: this calls for exercise of good judgement by the collector. Consider the use of rules of thumb for judging whether to pick or not to pick. Encourage group study of one specimen. Consider using weeds, garden species, or lab-grown specimens for educational purposes.

III. USING NATIVE PLANTS

- 1) Use of native plants--in wildflower shows, plant sales, & horticulture--must never threaten their populations.
- 2) Native plant species for sale should be obtained by salvage, seeds, or cuttings--in that order of priority--& whole plants should never be dug up, except for salvage. Seeds should not be sold. Growers must exercise discretion in collecting seeds & cuttings to avoid endangering plant populations.
- 3) Native plants for sale should state on the label how obtained or grown. Chapters should consider certifying commercial growers who follow good ethical practice, & should urge the public not to buy unless plants were obtained or grown according to these guidelines.
- 4) The sale & use of particularly aggressive & successful exotic plant species, such as gorse, broom, & pampas grass, should be discouraged.
- 5) Salvage of native plants should be encouraged when their destruction is certain: at quarries, mines, dams, building construction sites, road construction sites. Salvage is not necessarily called for, however, on logging sites, some recreational areas, & rangeland. Salvaged plants should be kept potted long enough before sale to ensure that they will survive the shock of transplant.

IV. WILDFLOWER SHOWS

- 1) Wildflower shows should make maximum use of their educational potential to inform the public & to encourage good judgement in the study, appreciation, & use of our native plants. From the relatively small number of blossoms that are picked comes increased public understanding which benefits the future of plants in the wild.
- 2) Chapters undertaking floral exhibits for the public or for specialized groups should consult the NPSO Guidelines for Wildflower Shows for suggested practices to implement the Society's goals.

IRIS SPECIES Of The WEST CENTRAL COAST RANGE

J.W. & Janice Gerdemann

Two *Iris* species, *I. tenax* and *I. chrysophylla*, are native to southern Lincoln County and northwestern Lane County. *I. tenax* is common in open places along the coast, in clear cuts, and along roadsides in the Coast Range. *I. chrysophylla* usually occurs at elevations of 1000 feet or higher, six miles or more from the ocean, along roadsides, at the edges of clear cuts, and in open forests.

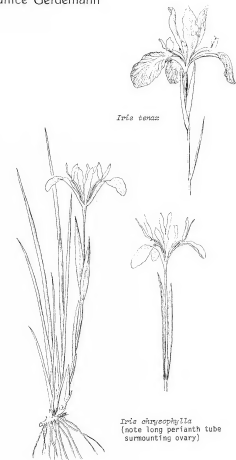
We have often seen *I. tenax* in areas where *I. chrysophylla* occurs, but have not observed mixed colonies. However, the differences in habitat reported by Clarkson (1959a, 1959b) and Lenz (1958, 1959) are not very apparent. Hybrids, which are easily recognized by their pink flowers and intermediate tube lengths, occur where the two species grow in close proximity.

The geographic range of *I. chrysophylla* given by Hitchcock, Cronquist, Ownbey, and Thompson (1959) is "open woods, mostly of ponderosa pine and Douglas fir; Willamette Valley, from Marion County south to much of southwest Oregon and to Del Norte County, California". While it has occasionally been collected on the east side of the central Coast Range we have not found reports of it or seen herbarium specimens collected from the west central Coast Range. Clarkson observed *Iris* in the east central Coast Range that he believed resulted from introgression of *I. chrysophylla* to *I. tenax*. He stated "These hybrid forms indicate either that *I. chrysophylla* is more abundant in the Coast Range than is now known or that it was more abundant in the past and has survived only on the more favorable sites." He concluded that *I. chrysophylla* was more abundant in the Coast Range of northern Oregon during some warm, dry period in past glacial times. *I. chrysophylla* is common on ridges and peaks of the central Coast Range today, and it frequently grows in close proximity to *I. tenax*.

The statement is made in *Vascular Plants of the Pacific Northwest* that *I. chrysophylla* is "on the whole not particularly attractive". Most plants bear cream colored or light yellow flowers; however, individual plants with deeper yellow flowers and conspicuous brown veins are strikingly beautiful.

References:

- Clarkson, G.D. 1959a. Field studies of natural hybridization in the Oregon species of *Iris* L. subsection *Californicae* Diels. *Madrono* 15:115-122.
- _____. 1959b. Environmental barriers to hybridization between *Iris tenax* Dougl. and *Iris chrysophylla* Howell. *Northwest Science* 33:171-179.
- Hitchcock, C.L., Cronquist, A., Ownbey, M., and Thompson, J.W. 1969. *Vascular Plants of the Pacific Northwest, Part One*. Univ. of Wash. Press.



Illustrations from *Vascular Plants of the Pacific Northwest*, by Hitchcock et al.

- Lenz, L.W. 1958. A revision of the Pacific Coast *Iriaceae*. *Aliso* 4:1-72.
- _____. 1959. Hybridization and speciation in the Pacific Coast *Iriaceae*. *Aliso* 4:237-309.

THREE SISTERS FLORA PROJECT

In 1968 the Museum of Natural History of the University of Oregon published *Plants of the Three Sisters Region* by Orlin L. Ireland (Bulletin No. 12). This guide has been appreciated by amateurs and professionals alike because of the utility of a flora restricted to a relatively small, discrete area. Many more plants have been found in this region and Ireland's taxonomy is outdated in several places, some keys are less than ideal, so the University Herbarium has begun a project to revise the flora.

The project area has been re-defined to include all of the Three Sisters Wilderness as presently constituted, for several reasons. One is that it is important to have precise boundaries on a local project so that decisions about what to include or exclude can be made consistently. Even more important is that the Three Sisters Wilderness is unique among the wilderness areas of Oregon in that it has been designated a Biosphere Reserve by the United States Committee on Man and the Biosphere (MAB). The MAB program is a world-wide effort to establish a system of reserves representative of the world's principal biogeographic regions. (Of 226 Biosphere Reserves in 62 countries, forty have been selected in the U.S. as of 1983.) These reserves are designated to focus long-term studies of human interaction with the natural environment and to serve as genetic reservoirs of natural diversity. An important facet of this concept is the gathering of baseline data on which any future study depends. An inventory and guide to the flora is thus fundamental to the scientific and educational purposes of the MAB Biosphere Reserves.

The new *Flora of the Three Sisters Wilderness* is being developed in a unique way. Instead of being produced by a single individual, or a few professional collaborators, this flora will be a cooperative effort by many different kinds of people. Anyone interested may support and participate. Groups that have voted to officially endorse and sponsor support of the project include the Obsidians (a Eugene-based hiking club), the Eugene Natural History Society, the Friends of the Three Sisters, Emerald Chapter-NPSO and state NPSO. Other groups have indicated favoring similar support, and a number of individual contributors have made cash donations toward the project. Initial fund-raising has been directed toward the purchase of an IBM PC-XT for the U of O Herbarium, toward which NPSO contributed \$500. The instrument is now installed in the Herbarium. (It cost \$3,272 for a package list-priced at \$5,479. All except \$322 of the funds came from private sources!)

A group of students in Computer Science at the University have been preparing a special program, "The Collections Agency", designed specifically for the Three Sisters Flora project. We expect the program to be fully operational by the coming field season, so that any botanist can take advantage of the stored data and participate in building the records for the eventual publication of the *Flora*. Not only will the program deliver an up-to-date checklist, fully documented, but it will be possible to generate site-specific lists for field trips. Some will be able to add only a few easily recognized species; others will be able to handle more. The tailored field trip lists, made possible by a grid-code, will let you know what to expect on a trip based on previous records, and also

know when a new record to be reported is at hand. The expectation is that this flora will have a longer list of acknowledgements than any *Flora* of comparable scope.

David Wagner
Emerald Chapter
Curator of the Herbarium
University of Oregon

Welcome New Members

Blue Mountain Chapter
Roy Sines (La Grande)

Corvallis Chapter
Sylvia Dennis
Lora Kelts
David & Charlene MacManinan
Gary Hunt

Emerald Chapter
Wilbur & Theona Jessen
Dave Curtis
Kenneth R. Carloni
Harry Spilman
Ann Tattersall
Melissa Carlson
Curtin Mitchell

High Desert Chapter
Anne Fox
Margaret S. Turner
Juliet Robertson

North Coast Chapter
(new chapter--see notice on p. 2!)
Richard Smith
Paul Levesque
Richard L. Apple
Helen E. Cheek
Daphne Peters
Sig Syversen
Jaylen Jones
Shirley Dallman
Duane L. Young
Sylvia Sullivan

Portland Chapter
William Robinson
Donna Roberts
Dorothy W. Morraill
Donald Howse
Tom Dieterich
Washington Park Zoo

Siskiyou Chapter
Siskiyou Rare Plant Nursery
Sara Smith
Linda M. Barker
Rob Frantz

Willamette Valley Chapter
Joseph E. Majeski

A NEW HYBRID OAK FOUND IN OREGON

In 1931, Mr. Oliver V. Matthews, a tree aficionado, discovered a "tree" near Miller Lake - later to be described as the "Oracle oak". Mr. Matthews was traveling with Dr. Albert N. Stewart, administrative curator of the herbarium at Oregon State College.

The following, is a report from "The Forest Log" Salem, Oregon, July, 1937 Vol. 26 No. 12 (in part) "On this occasion he (Matthews) made his way up to the shrub and to his surprise found that it had all the characteristics of the oracle oak. This was later confirmed by the botanists. Here again was another first. The tree had never been reported in southern Oregon".

In 1977, I reviewed Mr. Matthews notes and locations for said oak and visited his reported site. I located the clump of shrubby oaks - but to my surprise, it was apparent that said oaks were white oak hybrids [Subgenus *Quercus*]. The leaf tips were rounded, not bristle tipped - the reverse side of the leaf was dull with fine hairs, not glossy with stellate hairs and these along with several other characteristics established this oak as a white oak hybrid. The Oracle oak, *Quercus* x *morehus* Kell., is of Black Oak parentage [Subgenus *Erythrobalanus*], representing a cross of *Quercus wislizeni* x *kelloggii*. After searching several other sites, I noted other hybrid white oaks - always in association with *Quercus garryana* Doug. var. *breweri* (Engelm. in Wats.) Jepson and *Quercus sadleriana* R. Br. Campst. (the suspected parents).

In November, of this year, I met with Dr. John M. Tucker, at U. C. Davis Herbarium. Dr. Tucker, was in agreement with my findings on the new hybrid and commented: "This hybrid is presently known from only two collections - one collection in the Marble Mountains and a collection on Cook and Green Pass - no material has been published".

The following herbarium vouchers were submitted to U. C. Davis Herbarium - titled *Quercus garryana* Doug. var. *breweri* (Engelm. in Wats.) Jeps. x *Q. sadleriana* R. Br. Campst. all collected F.T. Callahan II:

- (1) Aug. 6, 1977, 42°01'N 123°21'W 4960' el. serpentine.
- (2) Aug. 6, 1977, 42°00.1'N 123°21.5'W 5482' el. granitic soils.
- (3) Aug. 6, 1977, 42°03.9'N 123°17.9'W 5440' el. quartz amphibole garnet mica schist.

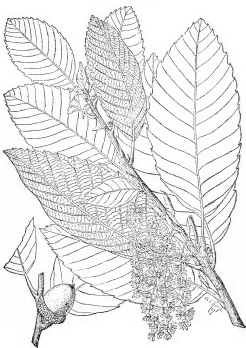
The above collections were made in southern Josephine County. It seems apparent that hybrids between the Brewer Oak and the Sadler Oak are not common - however backcrossing seems apparent on collection site (2).

Faank T. Callahan II
Siskiyou Chapter



Quercus garryana Doug.
var. *breweri* (Engelm. in Wats.) Jeps.
(= *Q. breweri* Engelm.)
Brewer oak

Quercus sadleriana R. Br. Campst.
Sadler oak



Illustrations from Forest Trees of the Pacific
Slope by George B. Sudworth

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address (including old address & zip code) should be
sent to the membership chair.

BULLETIN

Editor Julie Kierstead
11505 SW Summerville, Portland, OR, 97219; 636-4112
The NPSO Bulletin is published monthly. Copy is due
by the 15th of the month, & should be sent to the
editor. News, articles, photos, drawings, & non-
copyrighted material are welcomed.

GUIDELINES FOR CONTRIBUTORS

The Bulletin is not typeset; therefore typed,
computer-printed copy is much appreciated. But
no submission will be returned because it is
not typed. Please proofread & check facts.
PRIORITY: 10th of each month

FORMAT: Copy should be typed in 4x inch wide
columns, of any length. Author's name & chap-
ter affiliation (for other organizations) are
typed at the end of the article. There is no
standard paragraph treatment; one of these
is suggested:

- * for long articles, double space between
paragraphs, but do not indent the first
word of the paragraph
 - * for short articles or short paragraphs,
when double spacing looks odd, indent
the first word of the paragraph instead
- Type your own headline, centered, all caps.
In case of special forests, e.g. plant keys,
you are free to choose the layout.

- CONVENT: for each submission, provide
- * title
 - * author—specify whether byline is desired
for each item
 - * instructions as to whether item is to be
used in entirety or accepted at editor's
discretion
 - * source & date if item is not original
- ILLUSTRATIONS: black & white prints, ink
drawings, woodcuts, halftones, or at
welcome small doodles as well as larger
efforts. Please give source & date, if not
original.

STYLING: Names should follow Binchbrook &
Oremland's *Style of the Pacific Northwest*
where possible. Use of both scientific &
common names is encouraged. Genus & species
names are underlined or italicized.
ABBREVIATIONS: Abbreviations & abbrevia-
tions will not be returned unless it is
requested.

The Bulletin is published as a service to
NPSO members & the public. Your suggestions &
comments are always welcome.

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

CHAPTER (if known) _____

NAME _____

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IS THIS A CHANGE OF ADDRESS? If so please
write your OLD ADDRESS: _____

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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 4

April 1985

EDITOR TAKING LEAVE

Angie Evenden will serve as editor for the May & June Bulletins, while usual editor Julie Kierstead takes a break. PLEASE HELP ANGIE OUT BY SUBMITTING YOUR NEWS & ARTICLES ON TIME--TO REACH HER ON OR BEFORE THE 10TH OF THE MONTH. Copy for the May & June issues should be sent to Angie at P.O. Box 9338, Portland, OR 97207; as a last resort, she can be reached by phone at 248-8646.

CHAPTER NEWS

Blue Mountain

The Blue Mountain Chapter met on Feb. 12th, to elect officers & plan field trips for the year. Officers are: Bruce Barnes, President; Hilde Tilgner, Vice President; Harry Oswald, Secretary/Treasurer.

- 27 April, Sat. Field trip, UNATILLA FORKS, led by Bruce Barnes. Meet at Blue Mountain Community College greenhouse at 8:30 a.m.
19 May, Sun. Field trip, UKIAH; leader to be determined. Meet at BMCC greenhouse at 8 a.m.
8 June, Sat. Field trip, SQUAM CREEK/POVERTY FLATS. Meet at BMCC greenhouse at 8:30 a.m.
6-7 July, Sat. Field trip, DUCK LAKE, led by Rachel Sines. Meet at post office in Richland, Oregon, & Sun. at 11:00 a.m.
20 July, Sat. Field trip, TOWER MOUNTAIN, led by Karl Urban. Meet at BMCC greenhouse at 8 a.m.

Corvallis

- 8 April, Mon. Meeting, 7:30 p.m., Cordley Hall, Room 2087, Oregon State Univ. campus, Corvallis. SIGNS OF SPRING, by David MacManinan. David teaches nature photography at Linn-Benton Community College. His show will usher in spring with a harmony of sight & sound.
14 April, Sun. Field trip; an afternoon tour of AVERY & BELLFOUNTAIN PARKS. Meet at 1 p.m. in parking lot at NE corner of Cordley Hall (Orchard & 26th St.). Contact Esther McEvoy, 754-0893 for information about field trips.
27 April, Sat. Field trip to BALD HILL near Corvallis. This will be a strenuous afternoon hike. Meet at 1 p.m. in parking lot at NE corner of Cordley Hall. Leader: Paul Hammond.
27-28 April GLIDE WILDFLOWER SHOW, 20 mi. E of Roseburg on Hwy. 138; at Glide Community Center.
18 May, Sat. Field trip; FOREST INVASION OF MARYS PEAK MEADOWS, led by Teresa McGee. Meet at 10 a.m. in parking lot at NE corner of Cordley Hall. Bring lunch.
1 June, Sat. Field trip to RICKREALL RIDGE BOTANICAL AREA. Meet at parking lot, NE corner of Cordley Hall, 9 a.m. Led by Dan Luoma, 758-8063.
9 June, Sun. Field trip, WILDFLOWERS OF MARYS PEAK "ROCK GARDEN", led by Bob Frenkel. Meet at 10 a.m. in parking lot at NE corner of Cordley Hall. Bring lunch.
31 Aug., Sat. Tentative field trip over Labor Day weekend to Steens Mt. with Northern Nevada Native Plant Society members; led by Carolyn Wright.

Emerald

The Emerald Chapter held elections at its March meeting. New officers are: Valerie Sloane, Vice President; Evelyn Everett, Treasurer; Janelle Sorensen, Secretary. No consenting candidate for President was found-- please call Gaylee Goodrich, nominating chair, with your nomination for Emerald Chapter President; 485-3453.

- 9 April, Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building. Jacque Greenleaf will present a slide show on SERPENTINE WILDFLOWERS OF SOUTHWEST OREGON.
- 13 May, Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building. Dr. Rhoda Love will give a presentation & show slides of MOUNT PISCAH ARBORETUM.
- 10 June, Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building. The Hardesty-June Wilderness Council will present a slide show on HARDESTY MOUNTAIN.

***** *PLEASE NOTE, EMERALD CHAPTER MEETING DATE HAS BEEN PERMANENTLY CHANGED TO THE SECOND MONDAY OF THE MONTH*****

High Desert

- 27 April, Sat. Field trip to PAINTED HILLS. Meet at McDonalds at 8:30 a.m.

Mid Columbia

- 3 April, Wed. MEETING, 7:30 p.m., Mosier School.

North Coast

--- For information about April activities of the North Coast Chapter, contact Richard Smith, 842-4324.

Portland

Please call the trip leader or Doris Ashby, 245-2977, if there are any questions about a field trip. Unless otherwise stated, our meeting place will be the K-Mart at NE 122nd & Sandy Blvd. (exit 1-84 at 122nd northbound). Meet at the south end of the parking lot. Bring lunch, liquids, and all-weather clothing.

- 6 April, Sat. Field trip, MCCORD CREEK AREA. Identify flowers growing in the forest, near waterfalls, on talus slopes, & rocky cliffs. Meet at 8:30 a.m. at the K-Mart (see directions above). Leader: Dave Dobak, 643-2213.
- 9 April, Tues. Meeting, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson, Portland. How are the plants on Mt. St. Helens getting along? We'll find out from Jim Gale, head naturalist, Mount St. Helens National Volcanic Monument, in LIFE ON A ROCK IN THE CRATER (and elsewhere).
- 13 April, Sat. Field trip, RIDGEFIELD NATIONAL WILDLIFE REFUGE: CARTY UNIT. This part of the refuge is located just north of Ridgefield, WA. Take I-5 north to exit 14. Turn west on the exit road & follow it through town where it turns right (Main St.). Continue on for a few minutes until you see the refuge sign as you go up a hill on the edge of town (ignore any signs to other refuge units south of Ridgefield). Meet at the parking lot at 10 a.m. Leader: Shep Wilson, 228-7823.
- 20 April, Sat. Field trip, CAMASSIA PRESERVE. Join Glenn Walthall, 644-0745, at Camassia to see the diversity of flora in this small Nature Conservancy preserve near Portland. Meet in front of the West Linn High School at 9:30 a.m.
- 27 April, Sat. Field trip, SILVER CREEK FALLS STATE PARK. Enjoy the spring flowers & the many falls on this 7 mile loop hike. Meet at Handyman, 15550 SE McLoughlin, Milwaukie, at 8:30 a.m. (between Fred Meyer & G.I. Joe's). Leader: Virginia Diegel, 645-1344.
- 4 May, Sat. Field trip, COLUMBIA HILLS STROLL. This wildflower area is east of Lyle in Klickitat County, high above the Columbia River. Meet at the Dept. of Motor Vehicles, NE 60th & Glisan in Portland, at 8:00 a.m. or at the Bingen Mine at 9:30 a.m. Leader: Elizabeth Handler, 244-5320.

Siskiyou

- 11 April, Thur. Meeting, 7:30 p.m., Room 171, Science Bldg., SOSC campus, Ashland. Wayne Rolle will speak about BOTANIZING ALONG WIMER ROAD in Josephine & Curry Counties--this is the remote North Fork Smith River country.

- 21 April, Sun. Field trip, LOWER TABLE ROCK; a joint trip with the Sierra Club. Meet at Touvelle Park at 1 p.m. This is our best guess at when wildflowers will be in full display. Leaders are Diane Meyer & Shelley Tanquary, 535-3011.
- 5 May, Sun. Field trip, PRESCOTT PARK ON ROXYANNE HILL. This is the City of Medford's new undeveloped parkland. It contains fine examples of oak woodland, valley foothill, & chaparral plant communities. Meet at Medford's K-Mart parking lot at 1 p.m.; call 482-2263 for more information.

Willamette Valley

- 15 April, Mon. Meeting, 7:30 p.m., First United Methodist Church, corner of Church & State, Salem; meet in the Carrier Room. Susan Kephart will present an illustrated update on the population biology of the endemic coastal plant Silene douglasii var. oraria. This will be the last meeting of the year.
- 27 April, Sat. Field trip, TRYON CREEK STATE PARK; no leader as yet. Contact Clint Urey, 743-2802.
- 4 May, Sat. Field trip, with Dr. Morris Johnson of WOSC to have a look at a newly-discovered population of red-hued Erythronium revolutum. Carpool at K-Mart S. on Mission St. at 8 a.m., or at WOSC Science Bldg. in Monmouth at 8:30. Contact Clint Urey, 743-2802, for more information.
- 11 & 12 May MOTHER'S DAY WEEKEND FLOWER SHOW. The Willamette Valley Chapter will host what has become the annual flower show at the day use Silver Creek Falls Lodge. Hours will be 10 a.m. - 5 p.m. both days. There will be flower prints, photography, drawings, & a slide show of R & E plants, as well as over 150 species of freshly gathered wild flowers. Admission is free, parking is ample, and light refreshments will be offered. Weather permitting, there will also be short field trips in the park. Willamette Valley Chapter members who wish to help may contact Larry Scofield at 787-3833.

CENTER SEEKS ENDANGERED SPECIES INFORMATION

The Center for Environmental Education, under contract to the Council on Environmental Quality, is reviewing the Environmental Protection Agency's compliance with the Endangered Species Act, especially with regard to its implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Of particular concern are the direct effects of pesticide application on endangered species, as well as the effects of application on ecosystems in which such species occur.

CEE is seeking information concerning the injury or death of endangered or threatened animals or plants in connection with the use of chemicals controlled by FIFRA. Individuals who have such information or who are otherwise interested are urged to contact Roger E. McManus, Executive Director, Center for Environmental Education, 624 9th Street, NW, Washington, D.C. 20001.

Ann Tattersall
Emerald Chapter

LEGISLATIVE MEETING - APRIL 13th

There will be a NPSO legislative committee meeting on Saturday, April 13th, from 11am to 2:30pm in the herbarium library, Cordley Hall 4083, at Oregon State Univ. in Corvallis. The main focus of the meeting will be to define objectives for an endangered species bill for the state of Oregon. You are encouraged to attend this important meeting. For further information contact Esther McEvoy at 754-0893.

FORESTS OF KENYA

On Tuesday, April 9, The Nature Conservancy & the Western Forestry Center will present the last in their series on Forests and Grasslands. Having recently returned from a forestry tour of Kenya, Jill & Peter MacDonald will present their findings of the economic & environmental impact of current forestry practices in Kenya. The slide show will be held at Forest Hall of WFC, at 7:30 p.m., & is free and open to the public.

THE INCA EMPIRE: PERU TO CHILE

The next travelogue lecture/slide presentation at the Willamette Science & Technology Center will be about the 2500 mile stretch of South America from Ecuador to central Chile. Highlights include the city of Cuzco, capital of the vast Inca empire, Machu Picchu, Lake Titicaca, and the rainless Atacama Desert of Chile. The natural history focus will be on vegetation such as the native Puya species, the northerly orienting Copiapoa cactus, and the matorral zone of central Chile.

The presentation, by field biologist Gail Baker, will be offered Tuesday, May 7, 7:00 p.m. at WISTEC, 2300 Centennial Blvd., Eugene. Admission is \$2.00 for adults, \$1.00 college students & seniors, & \$.75 for children. Audience members can obtain lists of recommended reading and can peruse the maps, books, and ethnic artifacts on display. For information call 484-9027.

FLOWERS FOREVER

by Rhoda Love

Agency	1985 Budget	Our Goal
BLM	\$2.7 m	\$5 m
Forest Service	\$2.5 m	\$5 m

This month I am reprinting for Bulletin readers the following (slightly modified) letter I received this month from Faith Thompson Campbell, PhD, a botanist with the Natural Resources Defense Council, Inc., in Washington D. C. Faith writes concerning reauthorization of the Federal Endangered Species Act. Bulletin readers may feel that we have just finished reauthorizing the ESA--and they would be right! The Act must, however, be reauthorized by Congress EVERY 2 YEARS in order for protection of our nation's Rare and Endangered plants and animals to continue. As Faith writes:

Dear ESA Activist:

Here we go again! Once more, Congress is considering reauthorization of the Endangered Species Act (ESA). Authority to spend federal money to protect endangered species will expire in October unless Congress acts.

As in 1982, conservation organizations are working together to ensure reauthorization of a strong ESA. At present, one of the crucial weaknesses of the ESA is inadequate funds. This has particularly affected rare plant species because they are still under-represented on the lists and in recovery efforts of all agencies. The Bureau of Land Management (BLM) manages 300 million acres on which live 86 listed species (62 animals and 24 plants) and almost 900 "candidates" for listing (OVER 600 OF THEM PLANTS). This year, BLM is actively conserving about half of the listed species. The Forest Service's 191 million acres are home to 65 listed species and an unknown number of candidates; once again, plants predominate in the latter category. The Forest Service is currently doing serious conservation for only 11 of the listed species, NONE OF THEM PLANTS. If you would like to receive more information on these agencies' programs, please drop me a note. Please enclose \$1 to cover the costs of mailing and copying.

I urge you to begin writing NOW to members of the House and Senate Appropriations subcommittees on Interior to request the following increases in funding for endangered species programs. Please include any examples you know of BLM or FS failing to conserve listed species.

The members of the subcommittees are:
House: Sidney Yates (D-IL), Murtha (D-PA), Dicks (D-WA), AuCoin (D-OR), Bevil (D-AL), McDade (R-PA), Regula (D-OH), Loeffler (R-TX); Senate: James McClure (R-ID), Stevens (R-AK), Laxalt (R-NV), Garn (R-UT), Cochran (R-MB), Weiker (R-CT), Byrd (D-WV), Johnston (D-LA), Leahy (D-VT), DeConcini (D-AZ), Burdick (D-ND), Bumpers (D-AR).

House members may be written at US House of Representatives, Washington, DC 20515; Senators at US Senate, Washington DC 20510.

I believe you will want to support NRDC's campaign to ensure continuation of a strong endangered species program and to increase conservation efforts for plant species. Keeping close contact with Congressional staff is time consuming. Mailing crucial information to you and other activists is increasingly expensive. You will receive from me a regular newsletter, the Endangered Species Act Reauthorization Bulletin, affectionately known as "ESARB". Also I will supplement this with memoranda on specific issues. I hope you will help by contributing as generously as you can to NRDC's Plant Conservation Project. (NPSD has contributed in the past and will undoubtedly continue to support this worthwhile cause. R.L.)

Thank you very much for your help on both the political and financial levels. I look forward to working with you on this important project.

Sincerely,
Faith Thompson Campbell

NPSD members who wish to send information or individual contributions to the NRDC Plant Conservation Project can reach Faith at the following address: 1350 New York Ave. NW, Suite 300, Washington, DC 20005.

And NPSDers, please remember to write to your Oregon State representatives urging them to support an Oregon ESA.

Flowers Forever,
Rhoda Love

WHEN IS A VARIETY A SUBSPECIES?

If you have ever felt confused about the terms "variety" and "subspecies" in the names of plants, don't worry--you have plenty of company. The usage of these two categories is so mixed up, that even a professional taxonomist is hard-put to explain it. Yet there are some real differences, because in the official rules of botanical nomenclature, the two terms refer to two distinct levels in the hierarchy of named categories. Both represent taxonomic levels below the species level; that is, they are subdivisions of species. However, subspecies are higher in the hierarchy than varieties. They represent the larger or major subdivisions, while varieties are the smaller or minor subdivisions. This distinction seems to be quite clear and understandable, but it has gotten confused by the inability of botanists to agree as to what is "major" and what is "minor." On top of that, some people argue over whether there is a real need for two subdivisions for most species, or whether just one subspecific category would be sufficient.

It is the term "variety" that seems to cause the most trouble, because it has at least three alternative meanings. As a technical category for the scientific naming of plants, it is actually the Latin word *varietas* (plural *varietates*), for which *var.* is the usual abbreviation. In the tradition established by Carl Linnaeus, this term was applied to the major subdivisions of species. It was not until the early 20th century that the use of subspecies as a botanical category became popular. All the early books on plants of the Pacific Northwest region, by authors such as W. J. Hooker, Asa Gray, Sereno Watson, and Thomas Howell, used only one subdivision for their species--namely, *varietas*. Today, however, we must use the modern rules of botanical nomenclature, which give a subordinate status to this traditional term and assign the category *subspecies* (abbreviated *subsp.* or *ssp.*) to the major subdivisions of species in the plant kingdom.

An example of correct usage would be the name *Erigeron peregrinus* subsp. *callianthemus* var. *scapoosus*, on page 515 of "Flora of the Pacific Northwest." What this name says is that in the genus *Erigeron* there is a species called *peregrinus*, which has two major subdivisions; one of these, named *callianthemus*, is divisible into smaller units and for one such unit we assign the name *scapoosus*. The major groups, the two subspecies, differ in some important traits of the flower-heads and occur in different geographical areas. One is northern and coastal, extending from Alaska to northwest Oregon, while the other (ssp. *callianthemus*) is interior and southern, with a range from British Columbia and

subsp. *callianthemus*
var. *scapoosus*



Erigeron peregrinus



subsp. *callianthemus*
var. *callianthemus*

(Illustrations on this page are from Hitchcock et al., *Flora of the Pacific Northwest*; used with permission from the publisher.)

SUMMER FIELD TRIPS TO BLM WILDERNESS STUDY AREAS

The Bureau of Land Management is completing the Draft Environmental Impact statement phase of planning on the Wilderness Issue on BLM lands in Oregon. The DEIS will be published in late April and will be circulated to the public for review and comments. The formal comment period will be 120 days.

NPSO as an organization of individuals concerned with preservation and conservation of native plants will be involved with the study of the DEIS and related documents. In order to give effective and useful input to this planning work, we need information from field trips and from data files to become better informed about botanic values of these Wilderness Study Areas. Many of the presently listed WSAs have little or no botanical information available. Too few botanists have visited these areas.

BLM and conservation groups need more botanical information to manage and protect potentially important habitats and individual sensitive species, and are looking to groups like Audubon, Sierra Club, Oregon Rare and Endangered Plant Project, Oregon Natural Heritage Data Base, NPSO, Isaac Walton League,

Wilderness Society, Sage Association and ONRC to identify these important areas.

Field trips are being organized this summer so that NPSO members and friends may have the opportunity to travel to some WSAs to better understand the botanic resources. At least 6 organized field trips have been scheduled and listed. I encourage interested people to consider attending one of these organized trips during your summer vacation. Individuals and groups can also be of great assistance by visiting other WSAs (there are 87 of them), by collecting data, and making reports of their findings. People who are considering trips to WSAs this summer are asked to keep in touch with NPSO Desert Wilderness Committee members, so that we can coordinate our efforts, and compile useful reports of our findings.

Presently scheduled field trips are listed in this Bulletin. Next month a detailed description will be published for each trip. Interested people should call Barbara Fox, 659-2445, or the trip leader for information or to register for the trip.

Area	Date	Leader	Comments
John Day River	May 24-27	Barbara Fox 659-2445	A river rafting trip to survey river level habitats. Some cost involved for rafts and guides.
Aldrich Mtn	May 31, June 1 & 2	Angie Evenden 246-8646	Near Dayville and Ocochos: John Day River to ridge tops
Spring Basin	June 15	David Danley Naturalist at Sun River 593-1221 Ext. 394	Rolling plateau lands above John Day River near Clarno. Mini bus available from Bend and Madras to area.
Guano Creek	June 21-24	Rick Brown 222-1146	High rolling country south of Hart Mtn. Antelope Refuge
Steens, Malheur, Blitzen River and Blitzen Gorge	July 4th weekend	Several trips and leaders. Call Barbara Fox, 659-2445	Two or three trips are planned in this area. Depends on snowpack and accessibility
Pueblo Mtn	July 20, 21 and/or July 27, 28	Carolyn Wright 753-5120	Large mountainous area between Steens and Nevada border

Pacific University's
Malheur Field Station

SUMMER PROGRAM



Sandhill Crane
Grus canadensis

Fourteen selections in the three-week summer courses at Malheur Field Station fulfill a natural scientist's love for diversity. Covering many subject areas in field sciences, Malheur's courses are again the most diverse selection of their kind available and continue the strong liberal arts, undergraduate field tradition of Malheur. Students take one course full time for three weeks in classes that average 6-10 students per instructor.

"Nothing available on-campus or anywhere else can compare with the depth of learning and the fullness of the hands-on field experience which is available through the summer courses at MFS," said Ethen Perkins, program and co-director for the station. "Students frequently find that their experiences at a field station are the most significant in their college education. Non-traditional students keep coming back for other classes because they find the learning situations so stimulating and rewarding."

Session I begins June 16 and ends July 6. Classes available are: "Aboriginal Life Skills of the Northern Great Basin", taught by Jim Riggs; "Fossils and the Record of Ancient Life in Oregon", taught by Herb Meyer; and "Plant Ecology", offered by Lucile Housley.

Classes beginning July 7 through 27 are: "Advanced Aboriginal Life Skills" with Jim Riggs; "Field Ornithology", led by Carrol D. Littlefield; "Biota and Volcanic Landforms", taught by Ellen Benedict; and "Field Entomology", taught by Glenn Walthall.

From July 28 to August 17, courses at MFS will be: Sue Foster's popular "Natural History" class; Karl Holte's field botany course "Flowering Plants of Steens, Hart, and the Strawberry Mountains", Errett Callahan's intensive "Flintknapping Technology"; Jim Riggs' ethnobotany course "Native Uses of Basin Plateau Plants"; and Stephen Lindsay's new course, "Field Mammology".

Course costs are \$445 (\$425 for MFS Consortium school students or faculty) and include tuition, room, board, transferral of 4 semester (6 term) hours of college credit from Pacific University and as much as 1,200 miles of class travel. For more information contact Directors, Malheur Field Station, Box 260 E, Princeton, OR 97721, phone (503) 493-2629.



Prairie Falcon
Falco mexicanus

By Susan Lindstedt, Malheur Field Station

Alberta to California and New Mexico. In both subspecies, however, there are recognizable geographical races that differ in traits such as leaf shape, pubescence, and ecological adaptation. These smaller units are named as varieties, with var. agrippae representing dwarfed alpine plants having large, blunt basal leaves and few flower-heads. This detailed discussion of a single example illustrates that a naming system using all four categories--genus, species, subspecies, and variety--can be precise and informative. However, it can also be cumbersome if four names must be repeated each time we refer to a plant. In fact, we are allowed to skip the subspecies name if we wish, and simply refer to the alpine form as Erigeron peregrinus var. agrippae.

Another meaning for the term "variety" is found in horticulture, where it refers to cultivated varieties or "cultivars." Many ornamental and crop plants have been crossed, selected, and propagated to yield arrays of distinctive, often self-perpetuating forms which we name as cultivars. Such names are usually in English or other non-Latin languages. In grasses, for example, one finds cultivars called Highland bent and Gaines wheat, in rhododendrons there are Vulcan and Unique, and in apples we have Golden Delicious and Rose Beauty. Cultivated varieties, while important to us humans, are impermanent entities which depend on cultivation to survive. Therefore, their names must be kept separate from, and not confused with, the nomenclature of naturally evolved species, subspecies, and varieties.

From the above discussion, one would suppose that subspecies and varieties should be clearly distinct categories. Unfortunately, this is not so; tradition dies hard, and some botanical authors still use varietal names for the major subdivisions of species. The same plant group may be named a variety in one book and a subspecies in another. We have this problem, to some extent, with the standard references used to identify the higher plants of Oregon. Publications by C. L. Hitchcock and Arthur Cronquist, such as "Vascular Plants of the Pacific Northwest" and "Intermountain Flora," make frequent use of the varietal category and rarely refer to subspecies. Morton Peck's "Manual of the Higher Plants of Oregon" and Philip Munz's "A California Flora" are mixtures; they use varieties alone in some genera, subspecies alone in others, and sometimes a combination of both categories in a single genus. Small wonder, therefore, that users of these books may get the impression that the terms variety and subspecies are, in practical terms, identical.

Zoologists do not have the problems described above, because they allow only one category below the species, which is the subspecies. No such things as varieties exist in animal names. Some botanists have

proposed to change the rules for plants, so as to fit the zoological model, but this suggestion has consistently been voted down at the international meetings where such changes would have to be made. Until and unless we botanists get over our love for the traditional terminology of varieties, everyone must continue to live with the ambiguous and frequently interchangeable categories "var." and "subsp." in the names of plants.

Kenton L. Chambers
Oregon State University

Welcome New Members

Blue Mountain Chapter
Hilda Tilgner

Corvallis Chapter
Jim & Karen Fairchild
Judy Jernstedt

Emerald Chapter
Charles Patton
Leslie Harris

Portland Chapter
Michael D. Jones
Nancy Shogren
Margaret LaFalve
Richard Mishaga
Susanne Ebers

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MEMBERSHIP

Membership Chair Mary Falconer
1820 Engel Ave. NW, Salem, OR, 97304; 585-9419
Membership in the Native Plant Society of Oregon is open to all. Membership applications & changes of address (including old address & zip code) should be sent to the membership chair.

BULLETIN

Editor Julie Kierstead
11505 SW Samerville, Portland, OR, 97219; 636-4112
The NPSO Bulletin is published monthly. Copy is due by the 15th of the month, & should be sent to the editor. News, articles, photos, drawings, & non-copyrighted material are welcomed.

GUIDELINES FOR CONTRIBUTORS

The Bulletin is not typeset; therefore typed, camera-ready copy is much appreciated. But no submission will be rejected because it is not typed. Please proofread & check facts.

HEADINGS: 10th of each month
FORMAT: Copy should be typed in 4x inch wide columns, of any length. Author's name & chapter affiliation (or other organizational) are typed at the end of the article. There is no standard paragraph treatment; one of these is suggested:

- * for long articles, double space between paragraphs, but do not indent the first word of the paragraph
- * for short articles or short paragraphs, when double spacing looks odd, indent the first word of the paragraph instead
- Type your own headings, centered, all caps. In case of special formats, e.g. plant keys, you are free to choose the layout.

CAPTIONS: For each submission, provide
* title
* author—specify whether typing is desired for name time

* instructions as to whether item is to be used in entirety or excerpted at editor's discretion

* source & date if item is not original
ILLUSTRATIONS: black & white prints, ink drawings, woodcuts, halftones, et al. We welcome small drawings as well as larger efforts. Please give source & date, if not original.

SCIENTIFIC NAMES: should follow Hitchcock & Maguire's **PLANT OF THE PACIFIC NORTHWEST** where possible. Use of both scientific & common names is encouraged. Genus & species names are underlined or italicized.

RETURN OF ORIGINALS: Manuscripts & illustrations will NOT be returned unless it is requested.

The Bulletin is published as a service to NPSO members & the public. Your suggestions & comments are always welcome.

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 5

May 1985

PLEASE NOTE

Angie Evenden will serve as editor for the June Bulletin.
PLEASE HELP ANGIE OUT BY SUBMITTING YOUR NEWS & ARTICLES
ON TIME--TO REACH HER ON OR BEFORE THE 10TH OF THE MONTH.
Copy for the June issue should be sent to Angie at
P.O. Box 9338, Portland, OR 97207; as a last resort, she
can be reached by phone at 246-8646.

ANNUAL MEETING NOTICE

The NPSO Annual Meeting is to be held in Ashland on May 11
and 12th. The insert in this issue provides details on the
program and Saturday field trips. A registration form is
also provided. Reservations must be received in Ashland no
later than May 6th. So do not delay . . . send your
registration in now ! See you in Ashland !

CHAPTER NEWS

Blue Mountain

- 19 May, Sun. Field trip, UKIAH; leader to be determined. Meet at Blue Mountain Community College greenhouse at 8:00 a.m. or at Granny's store in Ukiah at 9:00 a.m.
- 8 June, Sat. Field trip, SQUAM CREEK/POVERTY FLATS. Meet at BMCC greenhouse at 8:30 a.m.
- 6-7 July, Sat. Field trip, DUCK LAKE (eastern Wallows), led by Rachel Sines. Meet at post office in Richland, Oregon, at 11:00 a.m.
- 6 Sun. Field trip, TOWER MOUNTAIN, led by Karl Urban, Meet at BMCC greenhouse at 8 a.m.
- 20 July, Sat.

Corvallis

- 13 May, Mon. Meeting, 7:30 p.m., Cordley Hall, Room 2087, Oregon State Univ. campus, Corvallis.
HEDGEHOG CACTUS (*Echinocereus*): POLLINATION ECOLOGY OF RARE AND ENDANGERED SPECIES,
by Dr. John Miller, OSU Botany Dept.
- 18 May, Sat. Field Trip; FOREST INVASION OF MARYS PEAK MEADOWS, led by Teresa McGee. Meet at 10 a.m.
in parking lot at NE corner of Cordley Hall. Bring lunch.
- 1 June, Sat. Field trip to RICKREALL RIDGE BOTANICAL AREA. Meet at parking lot, NE corner of Cordley Hall, 9 a.m. Led by Dan Luoma, 758-8063.
- 9 June, Sun. Field trip, WILDFLOWERS OF MARYS PEAK "ROCK GARDEN", led by Bob Frenkel. Meet at 10 a.m.
in parking lot at NE corner of Cordley Hall. Bring lunch.
- 31 Aug., Sat. Field trip over Labor Day weekend (date tentative) to Stearns Mt. with Northern Nevada Native Plant Society members; led by Carolyn Wright.

Emerald

- 27 April, Sat. Field trip, SPENSER BUTTE. For a botanizing outing meet at South Eugene High School 10:00 a.m. Trip led by Charlene Simpson and Evelyn Everett (345-1746).
- 13 May, Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building, Rhoda Love has an exciting program to present on MOUNT PISGAH ARBORETUM and the showing of a World Wildlife Fund film; 'ROOTS OF LIFE'. This film focuses on spectacular and unique plants of the world including Hawaii, Africa, Chile and the Mediterranean.
- 20 May, Mon. Special Event. Members are invited by Ken and Robin Lodewick to view their garden and FENSTEMON COLLECTION. Please come to Lodewick's at 2526 University, Eugene, at 7:15 p.m., 344-6533.
- 10 June, Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building. The Hardesty-June Wilderness Council will present a slide show on HARDESTY MOUNTAIN.

High Desert

- 31 May - Field trip, HAWK MOUNTAIN (HAWKSIE WALKSIE) WILDERNESS STUDY AREA. The purpose of this trip will be to survey this NSA located on the Lakeview BLM District. Meet at 9:00 a.m. on Friday behind McDonald's in Bend. Housing, kitchen and showers will be available.
- 2 June Please bring your own food and sleeping bags. For more information contact trip leader, Jack Schwartz, 382-2286.
- Fri. - Sun.

Mid Columbia

- 1 May, Wed. MEETING, 7:30 p.m., Mosier School.

North Coast

For information about May activities of the North Coast Chapter, contact Richard Smith, 842-4324.

Portland

Please call the trip leader or Doris Ashby, 245-2977, if there are any questions about a field trip. Bring lunch, liquids, and all-weather clothing for the trips.

- 4 May, Sat. Field trip, COLUMBIA HILLS STROLL, This wildflower area is east of Lyle in Klickitat County, high above the Columbia River. Meet at the Dept. of Motor Vehicles (DMV), NE 60th & Glisan in Portland, at 8:00 a.m. or at the Bingen Winery at 9:30 a.m. Leader: Elizabeth Handler, 244-5320.
- 11 & 12 May, Meeting. 1985 NPSO ANNUAL MEETING. See details on front page and insert.
- Sat. & Sun.
- 14 May, Tues. Meeting, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson. ALPINE PLANTS OF NEW ZEALAND, by Reuben Hatch. Color slides taken during his hiking-photography trip in January.
- 18 May, Sat. Field trip, HARDY RIDGE TRAIL. North of Beacon Rock State Park, the trail follows an abandoned logging road through open slopes to Hardy Ridge with unique views of the Gorge. Hike approximately 5 miles with 1300 feet elevation gain. Meet at the DMV (see May 4) at 8:00 a.m. Leader: Elizabeth Handler, 244-5320.
- 25-27 May, Field Trip, JOHN DAY RIVER AREA. Here's your chance to take day hikes along the river and to learn and become familiar with species on the east side of the Cascades. Plan to either car camp or stay in a motel. We will meet Sat. May 25th in the Madras area about midday. For specific details and car-pooling, call Barbara Fox, 659-2443.
- Sat. - Mon.
- 1 June, Sat. Field Trip, BALD BUTTE. A hike of 3 miles will reward one with a variety of flowers and views of Mt. Hood and the Hood River Valley. Meet at 8:00 a.m. at K-Mart, NE 122nd and Sandy Blvd. (exit 1-84 at 122nd north-bound), south end of parking lot. Leader: Esther Kennedy, 287-3091.

Siskiyou

- 9 May, Thur. Meeting, 7:30 p.m., Room 171, Science Bldg., SOSOC campus, Ashland. EASTERN MEDITERRANEAN WILDFLOWERS: AESTHETIC PERSPECTIVES Dr. Fred Shepard, Adjunct Professor of Biology, SOSOC, has spent many years working and living in Turkey and other middle-eastern countries. Field trip, LITTLE CRAYBACK TRAIL AND DOE HOLLOW, near Applegate Lake. We will hike 4 miles with moderate grades, and can expect to see Mimulus kelloggii, M. douglasii, and many other chaparral and open woodland species. Meet at Ashland Bi-Mart at 8:00 a.m., Madford K-Mart, 8:30 a.m., or the outpost store at Euch at 9:10 a.m. Led by Wayne Rolie, 482-0093.
- 9 June, Sun. Field trip, UPPER SHALE CITY AND THE HOLLENBECK STUDY AREA. Meet at 8:00 a.m. at the Madford K-Mart, or 8:30 a.m. at the Ashland Bi-Mart. Led by Gordon Larum, 772-1685.
- 13 June, Thur. Meeting, 7:30 p.m., Room 171, Science Bldg., SOSOC campus, Ashland. HISTORY OF HUMAN INTERACTION WITH PLANTS OF SW OREGON, by Jeff Lalonde, Rogue River N.F. Historian. The talk will cover Indian use of plants and will include the period of Chinese and early settlers of SW Oregon.
- 15 June, Sat. Field trip, PROPOSED SODA MOUNTAIN WILDERNESS AREA. Details will be available in the next issue. Led by Vern Crawford, 482-9196.

Willamette Valley

- 4 May, Sat. Field trip, with Dr. Morris Johnson of WOSC to have a look at a newly-discovered population of red-hued Erythronium revolutum. Carpool at south Salem K-Mart (Mission St.) at 8 a.m., or at WOSC Science Bldg. in Monmouth at 8:30 a.m. Contact Clint Urey, 743-2802 for more information.
- 11-12 May, Sun. 6Mon. MOTHER'S DAY WEEKEND FLOWER SHOW. The Willamette Valley Chapter will host what has become the annual flower show at the day use Silver Creek Falls Lodge. Hours will be 10 a.m. - 5 p.m. both days. There will be flower prints, photography, drawings, & a slide show of R & E plants, as well as over 150 species of freshly gathered wild flowers. Admission is free, parking is ample, and light refreshments will be offered. Weather permitting, there will also be short field trips in the part. Willamette Valley Chapter members who wish to help may contact Larry Scofield at 787-3833.
- 25-26 May, Field trip. SW OREGON AND 8-DOLLAR MOUNTAIN. Details are available from Clint Urey, 743-1802.
- 2 June, Sun. Field trip, LITTLE SINK. Meet for carpooling at S Salem K-Mart 8:00 a.m. A stop will then be made at the City Hall at Falls City. Leader: Larry Scofield, 787-1802.

CONGRATULATIONS

julie & bill

NPSO Editor Julie Kierstead and husband Bill Reinwand are the proud parents of a baby boy! He is named Paul Conrad and was born on Sunday, April 7th, at 11:45 p.m., and weighed 7 lbs. 5 oz.

ALL OF US IN NPSO SEND OUR BEST WISHES TO THE
THREE OF YOU FOR A FUTURE FULL OF HAPPINESS!!

----- SPECIAL NOTICE -----

All NPSO members please note, we will have a surprise baby shower for Julie at the annual meeting in Ashland (surprise Julie!!) If you care to, please join us in sharing with Julie. This would be one little way we could thank Julie for all she has done for NPSO. (If you are wondering what might be needed, a little bird says that Paul has very little clothing to grow into . . ie. 8 months & up.

ANNOUNCING
NPSO WILDFLOWER POSTER
WILDFLOWERS OF OREGON

Artist: Jay W. Miner

The first ever NPSO poster "Wildflowers of Oregon" will soon be available. The artist, Jay Wesley Miner, has done a superb job using colored pencils to illustrate 13 native Oregon plants. You may recognize a few of them, but it is doubtful if anyone has ever seen all of them in the wild. (How about it Jean Siddall?) The illustration here lacks color and has been reduced many times; in reality the poster is printed in full color and is 18 x 24 inches in size. Plants from all geographical areas of the state are pictured; there are representatives from coastal habitats, coniferous forests, interior valleys, sagebrush juniper woodlands, and from dry mountain slopes. Several of these plants are very rare, others are loosing ground as their habitats are being destroyed or altered. But there are a couple of common plants too; we didn't plan it that way but the artist added them for color and balance.

To increase the poster's educational value, there is an accompanying text about each plant that is printed on the reverse side. We are hopeful that teachers and schools will use the poster to create an awareness of our native plant heritage. It will appeal to everyone who enjoys wildflowers!

The poster is expected to be available in early May. We plan to have them for sale at the NPSO annual meeting in Ashland on May 11 and 12. The price to NPSO members will be \$4 each on a cash and carry basis. Chapters may wish to purchase posters at this time to take with them for resale at future chapter meetings. Inquiries are invited from dealers and businesses. Discounts are available when purchased in lots of 10 or more. The poster will also be available by mail after May 15 at the price of \$4.95 each (includes shipping). Mail order requests and payment should be sent to:
NPSO Wildflower Poster, 2370 Douglas Dr., Eugene, Oregon 97405.

Alan B. Curtis
Emerald Chapter
Chairman, Poster Committee



NEW DESIGNS FOR T-SHIRTS !

Two new NPSO T-Shirts featuring drawings by Gayla Goodrich have been ordered; Delphinium leucophagum (turquoise) and Lomatium cookii (yellow). Both come in men's sizes S,M,L and XL. Still available: Darlingtonia californica (lavender) by Linda Vorobik, M & L sizes; Opuntia polyacantha (silver-grey) by Julie Kierstead, S,M,L,XL. All of the above are short-sleeved, preshrunk 100% cotton, black printing with the heading 'Native Plant Society of Oregon' above the drawings. We also have some short-sleeved, white shirts with the green NPSO emblem, M & L. You may now order the Darlingtonia design with long sleeves, grey or lavender, S,M,L,XL. These have 'NATIVE PLANT SOCIETY' printed the length of one sleeve. When ordering please indicate size, design and a second choice if acceptable. Costs are \$7 plus \$1 postage for short-sleeve, and \$10 plus \$1 postage for long sleeve. Your local chapter may have some for sale. Also all of the T-Shirts will be for sale at the NPSO annual meeting in Ashland May 11 & 12. Make checks payable to Emerald Chapter -NPSO. Order from: Evelyn Everett, 4135 Alder St., Eugene, OR 97205; 345-1746.

FLOWERS FOREVER

by Rhoda Love

On March 14, in Washington D.C., the NPSO joined with the Natural Resources Defense Council, the New England Wildflower Society, the Waiheea Arboretum (and others) to testify before the Subcommittee on Fisheries, Wildlife Conservation and the Environment.

The testimony was prepared by Faith T. Campbell of the NRDC. The following are excerpts from that testimony:

"The Natural Resources Defense Council is a public-interest environmental organization of 45,000 members. Since 1978, we have sought to improve programs, including the Endangered Species Act, that protect rare species of plants. The Native Plant Society of Oregon has over 400 members in 8 chapters around the state. NPSO is 25 years old. The New England Wildflower Society has over 3,000 members, primarily in New England. The NEWFS is over 50 years old. The Waiheea Arboretum is a privately owned institution that provides a gene pool of wild plants for use by researchers.

The Subcommittee on Fisheries, Wildlife Conservation and the Environment has been helpful in the past, adopting amendments to the ESA and Lacey Act that increased legal protection for our native flora. Unfortunately, our task is not yet finished. The ESA does not yet provide adequate protection for plant species.

Two of the weaknesses are generic to the Act: lack of adequate resources to carry out listing, recovery, and other components of the program; and failure to protect candidate species. Because of the large number of candidate plant species and historic and continuing delays in listing them, these issues affect rare plants disproportionately...

A third weakness of the Act uniquely affects plant species: Whereas the Act broadly prohibits the "taking" of any endangered animal, only listed plants occurring on federal lands are protected from taking, and then only when the plant is "reduced to possession," i.e., collected for use in horticulture or as a pressed and dried specimen. That means vandals may cut, uproot or otherwise destroy endangered plants on federal lands without violating the Act. On private and other non-federal lands, the Act does

nothing to prevent vandals, collectors, and others from destroying or collecting imperiled plant species....

Mounting evidence shows that effective plant conservation requires more than the Act provides. Many listed or candidate plants have been seriously reduced through overcollecting....

Sarracenia ecrophila, the green pitcher plant, was listed as endangered in 1979. It is one of the rarest carnivorous plants in the world and highly sought-after by the specialist collector. Since all populations are on non-federal land, it is legal to collect it as long as the plants are not sold or bartered. In 1981, several plants were taken from one bog in Alabama. In 1984, a man from Florida travelled to Alabama to collect plants, returned to Florida and mailed specimens of the wild-collected plants to several people in other states....

Pediocactus knowltonii. This tiny cactus, one of the first to be listed as endangered, is a collector's item because of its diminutive size and large flowers. Between 1965 and 1981, its population was reduced from about 5,000 to 1,500 by flooding by a dam and commercial collecting of many of the remaining plants. The landowner was unable to prevent people from entering his land for this purpose....

NRDC, NPSO, NEWFS and Waiheea Arboretum ask the Subcommittee on Fisheries, Wildlife Conservation and the Environment to correct many of the deficiencies in the Act by adopting the following amendments:

1) amend Section 9(a)(2)(B) by deleting "remove and reduce to possession" and substituting "take";

2) insert a new subsection 9(a)(2)(C): "collect or destroy any such species from areas not under federal jurisdiction except with the written permission of the landowner;"

3) insert a new subsection 9(a)(2)(D): "possess, sell, deliver, carry, transport or ship, by any means whatsoever any such species taken in violation of subparagraphs (B) and (C);"

reorder the remaining subsections accordingly.

The proposed amendments would outlaw destruction as well as collection of

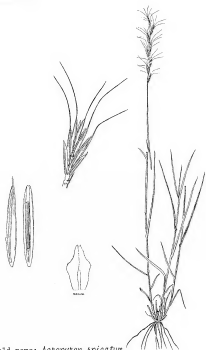
Please turn to page 58

HOW SHOULD WHEATGRASSES BE CLASSIFIED?

The past two years have seen the development of some novel and important concepts affecting the classification of North American grasses. As a result of research by geneticists at Utah State University, much new information is available on the relationships among species of berleys, wheatgrasses, wildryes, and squirreltails. These common names belong to grass genera which botanists know by the Latin names *Hordium*, *Agropyron*, *Elymus*, and *Sitanion*. For Oregon, about 30 species are involved in these studies, including many of the perennial grasses found abundantly in rangelands of the central and eastern parts of the state.

One controversial aspect of the genetic research on wheatgrasses is the possibility that it will cause revolutionary changes in the scientific names used for these grasses. Any radical alteration of the accepted names of plant species is sure to be unsettling to the many ecologists, range scientists, wildlife biologists, and others who know and work with these grasses on a day-to-day basis. One might question whether it is useful to make a sweeping overhaul of scientific names for such a well-known group of plants. Would it not be more practical to maintain the status quo of the familiar genus and species names presently in use? If faced with two or more alternative classifications, will any of us, in fact, have the option of choosing what system we prefer to use?

To answer the second question first, yes; we will be allowed to stay with the presently accepted classification if we wish. This is because the changes are based on taxonomic judgements of relationship, not on hard and fast rules of nomenclature. However, if more and more people elect to learn and use the revolutionary new classification, then the wisest course for us all will be to "join the crowd." Such changes of fashion have occurred before in plant nomenclature, by the way. Fifty years ago everyone called Douglas-fir "*Pseudotsuga taxifolia*," whereas now it is universally known as *Pseudotsuga menziesii*. Adopting new names for plants is "good" if it improves our knowledge of relationships and is derived from accurate scientific study. A change of name may be "bad," however, if it obscures relationships and is based merely on an arbitrary opinion about species' differences.



old name: *Agropyron spicatum*

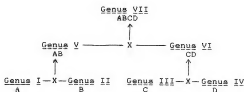
? new name: *Pseudoroegneria spicata*

(Illustration from Hitchcock et al., *Flora of the Pacific Northwest*; used with permission from the publisher)

Just how drastic will the proposed changes be? The answer is: very drastic! No fewer than nine new generic names will be introduced, three well-known genera will be split up, and one generic name will be dropped entirely. In their recent publications, Dr. Mary Barkworth and her colleagues at Logan, Utah, have listed the new genera as *Criticism*, *Elytrigia*, *Eremopyrum*, *Leymus*, *Pseudopyrum*, *Pseudoroegneria*, *Psathyrostachys*, *Tenanthium*, and *Thinopyrum*. Various species in the old genera *Elymus*, *Agropyron*, and *Hordium* will be rearranged, and the genus *Sitanion* will be merged with *Elymus*. Included in these changes are some Asiatic grasses which are not native to Oregon but have been introduced here purposely or by accident through human agency.

For those readers who are interested in particular grasses of economic importance, I will list some of the proposed new Latin names. The pesty weed called Medushead, usually classified in *Elymus*, takes the new name *Taeniatherum caput-medusae*. Crested Wheatgrass remains *Agropyron cristatum*, but Bluebunch Wheatgrass, formerly in *Agropyron*, becomes *Pseudoroegneria spicata*. Squirrel-tail, now named *Sitanion hystrix*, changes to *Elymus elynoides*. Quack-grass, presently in *Agropyron*, is renamed *Elytrigia repens*. Cultivated Barley, *Hordeum vulgare*, retains its name, but Meadow Barley changes to *Criticism brachyantherum*. Giant Wildrye, now known as *Elymus cinereus*, becomes *Leymus cinereus*. These are only a few examples, chosen to show the diversity of unfamiliar names involved in the new taxonomic system.

The wholesale scrambling of old, well-known names is an attempt by taxonomists to develop a classification that will accurately reflect evolutionary relationships. The best evidence for evolution in these grasses comes from their chromosomes, and from knowledge of the extensive natural hybridization that has given rise to present-day species. The relationships can be presented in a simplified diagram using arbitrary letters to stand for the different sets of chromosomes which form the evolutionary building blocks of the barley/wheatgrass/wildrye complex. In the diagram, each letter (A, B, C, D) stands for a different basic set of chromosomes. Any two species having the same basic set may cross to form partially fertile hybrids. However, when two species having different basic sets cross, they produce only sterile hybrids. A sterile hybrid plant may evolve into a fertile new species by doubling its chromosome number. As a matter of terminology, the basic sets, each with seven chromosomes, are called *genomes*, and the process of chromosome doubling is called *polyploidy*.



The genera in the complex are related like the floors of a pyramid-shaped building. On the bottom floor are those that have the four basic genomes. By hybridization (the X's) and polyploidy (the vertical lines), a second floor of two more genera evolved. Further hybridization between these two produced a third floor, whose genus combines all four original genomes. This diagram only partially expresses the complexity of the wheatgrass/wildrye/barley group, which on a world basis contains considerably more than four genomes and occupies a vast area of Northern Hemisphere grasslands.

This diagram is purposely labeled to show how, by the proposed new taxonomic approach, each basic genome is assigned a different generic name. Furthermore, when genomes combine through hybridization, each different combination is assigned a unique generic name. But is this the only way we can create a taxonomic system for this evolutionary pattern? Instead of the seven genera labeled on the chart, we might name the whole complex as a single, large, polymorphous genus! In so doing, we would be emphasizing the fact that all the species are so closely related as to be able to evolve in concert by hybridization and polyploidy. Evidently, their genomes are genetically compatible, and this important biological fact could form the justification for a single-genus classification. What would be lost in this totally different taxonomic approach would be the detailed information on relationships which the "seven-genus" system provides. Hence, the debate hinges on what is taxonomically "best" (whatever that word implies): should the generic names express large-scale evolutionary relationships among genomes, or should they emphasize the specific genomic units (A, B, AB, etc.) that undergo hybrid and polyploid interactions?

We will have to let that last sentence end in a "?" for now, because it is an unresolved question whose answer--for the wheatgrasses, at least--lies in the future. For a useful summary of this debate, I recommend the book "Grasses and Grasslands, Systematics and Ecology," edited by J. R. Estes, R. J. Tyrl, and J. N. Brunken, published in 1982 by the University of Oklahoma Press. In it, Drs. Estes and Tyrl make a plea for a modified one-genus approach, in which the barley genus, *Hordeum*, would be retained, but all the species of wheatgrasses, wildryes, and squirreltails would be merged into the single genus *Elymus*. Indeed, taxonomy can be simple, if we choose to make it so!

Kenton L. Chambers
Oregon State University

THE NPSO DESERT REPORT

BY BARBARA FOX

The BLM is involved in an inventory process of their lands to identify lands that are suitable as Wilderness. The process has proceeded through a number of phases leading to the writing of the Draft Environmental Impact Statement to be published in late April, 1985.

During the study and inventory process, documents have been produced that describe the Wilderness Study Areas, and summarize various aspects of each specific area. The current summaries, called "Unit Resource Analysis III - Present Situation" are available to the public for review. Each URA document contains information on a single WSA which includes the following topics.

Description of the WSA (location, boundaries, size and shape, land and mineral status, land use)

Physical description (geology, topography, water and drainages, vegetation, wildlife)

Special Features (geology, vegetation, wildlife, cultural, unique ecological interrelationships, scenic qualities, education/scientific values)

Naturalness quality analysis

Solitude quality analysis (size and configuration, topographic screening, vegetative screening, outside sights and sounds, ability of user to find a secluded spot)

Primitive and unconfined recreation (hiking, backpacking, hunting, fishing, horseback riding, bird-watching, sightseeing, photography, hang gliding, rock climbing, winter sports, water sports, challenge, access points and possible high use areas)

Manageability

Access (motorized vehicle conflicts, use of motorized vehicle use for grazing or mining purposes).

Some WSAs that are well known and/or complex will have a great deal of information that results in a lengthy detailed URA (70 pages), with lesser known WSAs having a shorter URA (20 pages). Interested people who wish to review one or more URAs will find complete sets at the Oregon Natural Resource Council (ONRC) office in Portland (Nancy Peterson 224-0201), or Portland Audubon (292-6855).

The NPSO Desert Wilderness Committee chairperson has made copies of the URA for the WSAs that will be visited this summer on NPSO field trips. If you would like a copy of one of these, request the traveling NPSO copy, make your own copy, and mail the traveling copy back to me (Barbara Fox 11455 SE 35, Milwaukie, 97222, 659-2445).

The NPSO copies of the URAs and a copy of the Draft Environmental Impact Statement, and accompanying maps will be available for review at the NPSO state annual meeting in Ashland on May 11 and 12.

DESERT CONFERENCE VII: JUNE 6, 7 & 8

The 7th annual Desert Conference will be held at Central Oregon Community College in Bend. Field trips on Fri. & Sat. will visit local wilderness study areas. An all-day Friday tour will examine rangeland management practices in central Oregon, including a visit to Pat and Connie Hatfield's High Desert Ranch. Saturday panel discussions will focus on different perspectives on management and use of rangeland resources. Natural history presentations are also planned. Friday evening and Sunday will be devoted to wilderness proposals, and conservation strategy. For further information and registration materials contact: Don Tryon, P.O. Box 450, John Day, OR 97845, 575-2671.

4TH WILD OREGON AUCTION

Sat., May 11, the fourth annual Wild Oregon Auction will be held in Studio One of Eugene's Hult Center. The auction is a benefit for the Oregon Natural Resources Council. Auction items preview and entertainment 7:00 to 8:00 p.m., silent auction 7:00 to 9:00 p.m., and oral auction from 8:00 to 10:00 p.m. Admission free. For further information contact ONRC, 1161 Lincoln St., Eugene 97401, 344-0675.

RARE, THREATENED AND ENDANGERED PLANTS AND ANIMALS OF OREGON

The 1985 edition of Rare, Threatened and Endangered Plants and Animals of Oregon is now available from the Oregon Natural Heritage Data Base. Information on Oregon's special plants has been revised to reflect their current status and incorporates many of the comments received at the Rare and Endangered Plant Conference held in Eugene last November. Thanks to all who participated for their help in providing an important resource for amateur and professional botanists alike. Copies of Rare, Threatened and Endangered Plants and Animals of Oregon are available for \$4 each (one dollar is for postage, so save money and pick up a copy) from the Oregon Natural Heritage Data Base, 1234 NW 25th Ave., Portland, OR 97210.

SUMMER FIELD TRIPS TO BLM WILDERNESS STUDY AREAS

May 25-27 John Day River	Barbara Fox 659-2445	The John Day River Field Trip was scheduled to be a rafting trip. Because of unforeseen complications the rafting part of this trip is cancelled. The trip will concentrate on botanizing the river level habitats through day hikes. We should see a number of John Day area endemics, as well as spectacular scenery of the cliffs, springs, and unusual geologic formations. We will meet in the Madras area on Sat. Participants will be able to camp or stay in motels in the area. Bring plant books, bird books, sun protection supplies, sturdy boots, mosquito repellent, water, cameras, binoculars, and musical instruments. Participants must pre-register for this trip with Barbara Fox, 11455 SE 35, Milwaukie, OR 97222, 659-2445.
May 31 - June 2 Aldrich Mt.	Angie Evenden 246-8646	We will survey the botanical resources of the Aldrich Mt. WSA on the Burns BLM District. Aldrich Mt. is located south of Dayville and parallels the southfork of the John Day River. Average elev. is 4500 ft., and the area is characterized by sagebrush (juniper) dominated grasslands, with ponderosa pine and douglas fir in the drainages. This is prime habitat for California big horn sheep, Rocky Mt. Elk and mule deer. We will have a base camp with day hikes. The terrain is rugged so hiking will be strenuous. Please contact Angie for directions, details and to register. P.O. Box 9338, Portland, 97207.
June 15 Spring Basin	David Danley Naturalist 593-1221 ext. 394	Rolling plateau lands above John Day River near Clarno. Mini bus available from Bend and Madras to area.
June 21-24 Guano Creek	Rick Brown 222-1146	High rolling country south of Hart Mtn. Antelope Refuge.
July 4th wk Steens, Malheur, Blitzen River	Several trips call Barbara Fox 659-2445	Two or three trips are planned in this area. Depends on snowpack and accessibility.
July 20 & 21 Pueblo Mtn	Carolyn Wright 753-5120	Large mountainous area between Steens and Nevada border.

BLM PUBLIC COMMENT OPPORTUNITIES

The following schedule lists opportunities for public involvement in Oregon BLM planning, environmental impact assessment, decision-making, and comments on proposed regulations. Copies of published documents, and specific dates, times, and locations for public meeting are available from appropriate district offices.

PRINEVILLE: Two Rivers Draft Resource Management Plan/Environmental Impact Statement will be available for a 90-day comment period in early April.

SOUTHEAST OREGON BLM MAP

A Bureau of Land Management Map, Southeast Oregon Special Management Areas is available. This map shows the location of BLM special management areas on 12,200,000 acres in southeast Oregon, and includes Research Natural Areas (RNA), Areas of Critical Environmental Concern (ACEC), Wilderness Study Areas (WSA), Wild Horse Management Areas (HMA), Outstanding Natural Areas (ONA), and recreation lands. Each of these designations is defined in a narrative section. In addition a summary of natural features and management objectives is provided for each RNA and ACEC.

This map is a valuable resource for anyone interested in learning more about the SE Oregon desert. Copies may be obtained from the BLM at a cost of \$4.00, by writing, B.L.M., P.O. Box 2965, Portland 97208. Make checks payable to B.L.M..

endangered plants on federal lands, and collection and intentional destruction of such plants on non-federal lands without the permission of the landowner. The amendments would also prohibit possession and exchange of endangered plants that have been taken in violation of the two preceding subsections, i.e., collected from federal lands without a permit or from non-federal lands without the permission of the landowner."

Faith's testimony went on to express concern about weakness in enforcement of treaties on international trade in endangered species. For a full copy of the testimony, you may write to her at the following address: Faith Thompson Campbell, Plant Conservation Project, NRDC, 1350 New York Ave. NW, Suite 300, Washington, DC 20005.

Please write also to Senators Hatfield and Packwood and to your representative to express your support for the reauthorization of the Endangered Species Act with the NRDC amendments.

The NPSO will be joining the NRDC again in testifying before the Senate hearings on the ESA on April 16. We very much appreciate the work done by Faith Campbell and the NRDC on our behalf. Any contributions to the Plant Conservation Project would be gratefully received and can be sent to the address above. And PLEASE don't forget to write to your STATE representatives encouraging them to support a state ESA for Oregon. Remember, only 3 species of over 100 candidates in Oregon have so far received federal listing!

Rhoda Love,
State Conservation
Chair

Our legislators are interested in endangered species. The following is Carl Hosticka's reply to Rhoda Love's letter in "FLOWERS FOREVER", NPSO Bulletin, Mar. 1985.

CARL HOSTICKA
LAND COURT
SHERBORN, MA
REPLY TO ADDRESS ABOVE
11 Woodland Avenue
Salem, Oregon 97301-3347
12 Phone Area
Salem (503) 596-1140



HOUSE OF REPRESENTATIVES
SALEM, OREGON
97301-1347

March 26, 1985

Dr. Rhoda N. Love
Conservation Chair
Salvage Plant Society of Oregon
393 Mul-Vee Dr.
Eugene, OR 97405

Dear Dr. Love:

Thank you for your letter addressed to me in your publication. The points you raised are important and I hope others from your organization follow your lead.

Oregon has always prided itself as being one of the front runners of the nation in protecting the beauty of our environment and in protecting our wildlife. I share your concerns about the preservation of species of plants as well as animals. Extinction would be a terrible loss and I do not want to see this happen. To steal a quote: "Extinction is forever." I support your efforts to provide the needed protection of our wildlife as that we may preserve it for the generations to come.

Please keep me informed of the development and progress of legislation on this subject.

Yours sincerely,

Carl Hosticka
State Representative
District 40

REFUGE OPEN HOUSE AND TRAIL DEDICATION

An open house will be held at William L. Finley National Wildlife Refuge on May 18th, 10 a.m. - 4 p.m.. The day will feature a nature trail dedication in memory of Fred and Mildred Evenden, noted national conservationists. The dedication ceremony will be held at "Woodpecker Loop" trailhead at 10 a.m., and following, Portland naturalist Dave Marshall will lead a hike along the trail. Other activities will include an open-house at refuge headquarters, displays and hikes. Finley NWR is located 12 miles south of Corvallis. For more information contact: William L. Finley Refuge, Corvallis, 757-7236.

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MEMBERSHIP

Membership Chair Mary Falconer
1920 Engel Ave. NW, Salem, OR, 97304; 545-9419
Membership is the Native Plant Society of Oregon is open to all. Membership applications & change of address (including old address & zip code) should be sent to the membership chair.

BULLETIN

Editor Angie Bream
P.O. Box 9339, Portland, OR, 97207; 244-8446
11535 SW Hummelville, Portland, OR, 97219; 638-4111
The NPS Bulletin is published monthly. Copy is due by the 10th of the month. It should be sent to the editors. News, notices, photos, drawings, & non-copyrighted material are welcome.

GUIDELINES FOR CONTRIBUTORS

The Bulletin is not typeset; therefore typed, camera-ready copy is much appreciated. But no submission will be rejected because it is not typed. Please proofread & check facts.
DEADLINE: 10th of each month
FORMAT: Copy should be typed in 4x6 inch wide columns, of any length. Author's name & chapter affiliation (or other organization) are typed at the end of the article. There is no standard paragraph treatment; one of these is suggested:

- * for long articles, double space between paragraphs, but do not indent the first word of the paragraph
- * for short articles or short paragraphs, when double spacing looks odd, indent the first word of the paragraph instead
- Type your own headlines, centered, all caps. In case of special formats, e.g. plant keys, you are free to choose the layout.
- CREDITS:** For each submission, provide
 - * title
 - * author—specify whether byline is desired for name items
 - * instructions as to whether item is to be used in entirety or excerpted at editor's discretion
 - * source & date if item is not original
- ILLUSTRATIONS:** black & white photos, ink drawings, woodcuts, halftones, et al. We welcome small drawings as well as larger efforts. Please give source & date, if not original.
- SYNOPSIS:** Names should follow Hitchcock & Cronquist's *Flora of the Pacific Northwest* where possible. Use of Latin scientific & common names is encouraged. Genus & species names are underlined or italicized.
- STATUS OF ORIGINALS:** Manuscripts & illustrations will not be returned unless it is requested.

The Bulletin is published as a service to NPSO members & the public. Your suggestions & comments are always welcome.

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

CHAPTER (if known) _____

NAME _____

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IS THIS A CHANGE OF ADDRESS? If so please write your OLD ADDRESS: _____

CITY _____ STATE _____ ZIP _____

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*All contributions to the Native Plant Society of Oregon, a non-profit organization, are tax deductible. Please make checks for dues & contributions payable to NATIVE PLANT SOCIETY OF OREGON. Send completed form & full remittance to: MARY FALCONER, NPSO MEMBERSHIP CHAIR, 1920 Engel Ave. NW, Salem, OR 97304.

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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 6

June 1985

----- MESSAGE FROM THE EDITORS -----

Julie Kierstead and Angie Evenden will serve as co-editors of the Bulletin, beginning with the July issue. All copy is to be sent to Julie at 11505 SW Summerville, Portland, OR 97219 (same address as before). PLEASE HELP US OUT BY SUBMITTING YOUR NEWS AND ARTICLES ON TIME -- TO REACH US ON OR BEFORE THE 10TH OF THE MONTH.

CHAPTER NEWS

Blue Mountain

- 8 June, Sat. Field trip, SQUAM CREEK/POVERTY FLATS. Meet at BMCC greenhouse at 8:30 a.m.
- 8 June, Sat. Field trip, SQUAM CREEK/POVERTY FLATS. Meet at Blue Mountain Community College greenhouse at 8:30 a.m.
- 6-7 July, Sat. Field trip, DUCK LAKE (eastern Wallows), led by Rachel Sines. Meet at post office in
& Sun. Richland, Oregon, at 11:00 a.m.
- 20 July, Sat. Field trip, TOWER MOUNTAIN, led by Karl Urban. Meet at BMCC greenhouse at 8:00 a.m.

Corvallis

To register for field trips please call Esther McEvoy (754-0893) or Dan Luoma (758-8063).

- 1 June, Sat. Field trip to RICKREALL RIDGE BOTANICAL AREA. Meet at parking lot, NE corner of Cordley Hall, 9 a.m. Led by Dan Luoma, 758-8063.
- 9 June, Sun. Field trip, WILDFLOWERS OF MARYS PEAK "ROCK GARDEN", led by Bob Frenkel. Meet at 10 a.m. in parking lot at NE corner of Cordley Hall. Bring lunch.
- 31 Aug., Sat. Field trip over Labor Day weekend (date tentative) to Steens Mt. with Northern Nevada Native Plant Society members; led by Carolyn Wright.

Emerald

- 10 June, Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building. Michael Williams of the Hardesty-June Wilderness Council will present a multi-media slide-tape show on the Hardesty Mountain - Mount June backcountry.

High Desert

--- For information about June activities, call Chapter President Marge Ettinger, 382-2255.

Mid Columbia

- 5 June, Wed. MEETING, 7:30 p.m., Mosier School.

North Coast

For information about June activities of the North Coast Chapter, contact Richard Smith, 842-4324.

Portland

Please call the trip leader or Doris Ashby, 245-2977, if there are any questions about a field trip. Bring lunch, liquids, and all-weather clothing for the trips.

- 1 June, Sat. Field Trip, BALD BUTTE. A hike of 3 miles will reward one with a variety of flowers and views of Mt. Hood and the Hood River Valley. Meet at 8:00 a.m. at K-Mart, NE 122nd and Sandy Blvd. (exit 1-84 at 122nd north-bound), south end of parking lot. Leader: Esther Kennedy, 287-3091.
- 8 June, Sat. Field trip, BLACK WOLF MEADOWS in the Clackamas Ranger Dist., Mt. Hood N.F. Meet at K-Mart SE 82nd, Milwaukie Expressway, SW corner of parking lot, at 8:00 a.m. Leader: Ruth Hansen, 289-5832.
- 11 June, Tue. Meeting, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson. Margie Willis, professor at Clark College, Vancouver, WA, will present a slide program on Audubon's NATURAL HISTORY TRIPS IN COSTA RICA.
- 15-16 June, Sat. & Sun. Field trip, COLUMBIA GORGE APPRECIATION WEEKEND, Friends of The Columbia Gorge. Saturday - GRASSY KNOLL. Beautiful wildflowers are displayed on prominent rocky outcroppings. Hike about 6 mi. r.t. on this flower appreciation and identification hike. Meet 8:00 a.m. at south end of K-Mart parking lot (see June 1), or 9:00 a.m. at north end of Bridge of the Gods. Leader Jan Lindgren, 573-6918. Sunday - LARCH MOUNTAIN to MULTNOMAH CREEK. This 8 mi. hike will begin and end at the top of Larch Mountain, we will lose and gain 1,200 ft. elevation. Meet 8:30 a.m. at the Dept. of Motor Vehicals (DMV), NE 60th and Glisan. Leader: Dave Doback, 643-2213.
- 22 June, Sat. Field trip, PUNCH BOWL on Hood River and PARKDALE LAVA BEDS. Meet at 8:30 a.m. at K-Mart (see June 1) for car pooling or meet leader, 9:30 a.m. in Hood River at the Fruit Tree. Leader: Don Barr, 246-2785.
- 29 June, Sat. Field trip, COAST RANGE, KIDDER BUTTE. George will take you where the flowers are. Meet at OMST parking lot, 8:00 a.m. Leader: George Lewis, 292-0413.

Siskiyou

- 9 June, Sun. Field trip, UPPER SHALE CITY (roadside botanizing) and HOLLENBECK STUDY AREA (easy hiking). Meet at 8:00 a.m. at the Medford K-Mart, or 8:30 at the Ashland Bi-Mart. Led by Gordon Larum, 772-1685. Bring lunches and water.
- 13 June, Thur. Meeting, 7:30 p.m., room 171, Science Building at Southern Oregon State College, Ashland. HISTORY OF HUMAN INTERACTION WITH PLANTS OF SW OREGON, by Jeff Lalande, Rogue River N.F. Historian. The talk and slide show will cover Indian uses of plants and will also include uses by Chinese and early settlers of SW Oregon.
- 15 June, Sat. Field trip, PROPOSED SODA MOUNTAIN WILDERNESS AREA, jointly with the Soda Mountain Wilderness Council. Easy to moderate walk on and near Pacific Crest Trail, with opportunities for strenuous side trips. Your help is needed in locating T&E species in this area. Meet at Medford K-Mart 8:00 a.m. or Ashland Bi-Mart 8:30. Bring lunch and water for all day. 50 miles roundtrip from Ashland. Led by Vern Crawford, 482-9196.
- 5 - 7 July, Fri.-Sun. Field trip, A CAR--CAMPING EXCURSION TO THE LAVA BEDS NATIONAL MONUMENT AND THE MEDICINE LAKE COUNTRY OF THE MODOC NATIONAL FOREST. Our travels will take us through basin and range and lava upland country with an opportunity to get acquainted with plant communities not represented on our side of the Cascades. Highlights will include birdwatching at Tule Lake NWR, and visits to lava tubes, ice caves, obsidian flows, mountain peaks and a couple of beautiful lakes (and fishing?). This trip is suitable for both the laid-back campers and the real go-getters. Also, it is possible to join us for the first day only. To make all arrangements, Call Wayne Rolie, 482-0093 before June 28th.

Willamette Valley

- 2 June, Sun. Field trip, LITTLE SINK area. Carpool at S Salem K-Mart 8:00 a.m., or at the City Hall in Falls City at 9:00 a.m. Leader: Larry Scofield, 787-3833.
- 8 June, Sat. Field trip, MCKENZIE TRAIL. Carpool at S Salem K-Mart 7:30 a.m. Leader: Frances Schaefer, 393-7492.
- 15 June, Sat. Field trip, CASCADE FLOWERS. Carpool at the Gingerbread House in Mehama at 8:00 a.m. Leaders: George and Harriet Schoppert, 859-2613.
- 22 June, Sat. Field trip, TABLE MOUNTAIN & BLUE MOUNTAIN with Alan Curtis, BLM Biologist. Carpool S Salem K-Mart, 7:30 a.m. Contact: Clint Urey, 743-2802.
- 30 June, Sun. Field trip, SOCIALIST VALLEY. Carpool at S Salem K-Mart at 8:00 a.m. or at the City Hall at Falls City at 9:00 a.m. Leader: Larry Scofield, 787-3833.

Wm. Cusick

--- A field trip schedule is being worked out, including trips to Marble Canyon near Baker, and to the proposed Indian Creek RNA in the Wallowas, as well as a loop drive around the Wallowas. For the latest details, contact Andrew Kratz at 963-9358.

WSA Field Trips

Contact trip leader or Barbara Fox (659-2445) to register for trips to BLM Wilderness Study Areas.

- 15 June, Sat. Field trip to SPRING BASIN. Rolling plateau lands above the John Day River near Clarno. Mini bus available from Bend and Madras to area. Trip leader: David Danley 593-1221 ext. 394.(Sunriver).
- 21-24 June, Fri.-Mon. Field trip to Guano Creek WSA. High rolling country south of Hart Mtn. Antelope Refuge. Trip leader: Rick Brown, 222-1146 (Portland).
- 4 July, wk4 Field trips to the STEENS, MALHEUR AND ELIZEN RIVER AREA. Two or three trips are planned in this area. Depends on accessibility. Call Barbara Fox for details, 659-2445.
- 20&21 July Sat&Sun Field trip to STEENS to NORTHERN NEVADA. Large mountainous area between Steens and Nevada. Call Carolyn Wright for details, 753-5120 (Corvallis).

FLOWERS FOREVER

by Rhoda Love

Dear Fellow NPSOers,

At the end of next month (July 31, 1985), I will need to resign from my position as NPSO State Conservation Chair. My husband will be on sabbatical leave from the UO starting in September and in mid-August he and I will be leaving for a month-long trip to Australia. Then, early in 1986, our family will depart for Tübingen, West Germany, where we will live until approximately July 31, 1986.

The post of State Conservation Chair cannot be handled in a hit-or-miss fashion by someone who flits in and out of the country, therefore, I am writing to our President today, to ask that he find a replacement to whom I can turn over my files before I leave for Australia.

I would like to write 2 more Flowers Forever columns, for the July and August Bulletins, and then I hope our Editor will find a replacement columnist to carry on in my place.

This month, I would like to use some of my space to acknowledge a few of the many people and organizations who have greatly assisted the NPSO in its efforts to conserve Oregon's native flora. First, of course, come Julie Kierstead and Angie Evenden for publishing our superb monthly Bulletin; next, Esther McEvoy merits our gratitude and strong support for her hard work as Chair of our Legislative Committee; many thanks to Baylee Goodrich for designing our lovely new notecards and to George Lewis for handling card distribution; Alan Curtis did a magnificent job as chairman of our Poster Committee and the resulting poster is superb; thanks to Leighton Ho and Evelyn Everett of Emerald Chapter for handling T-shirt manufacture and distribution and to the artists whose work appears on the shirts -- Julie, Baylee, Nadine Smith and Linda Vorobik. (NPSO T-shirts are now being worn in many parts of the United States including Washington, D.C.!) Many thanks to Barbara Fox for coordinating our visits to BLM Desert Wilderness Study Areas. I'm very grateful to all you NPSOers who keep me informed about statewide conservation issues, and

especially to Mariana Bornholdt for her work with Friends of Walker Creek Wetlands and for her role as legislation-watcher, and to Veva Stansell for her work on preservation of Curry County beaches and estuaries; I also applaud the work of our Wildflower Show Committee, Mike Fahey, Dan Ludema and Mariana Bornholdt.

Two organizations with which we have worked closely deserve mention. The first is the Oregon Natural Resources Council. ONRC representatives Wendell Wood and Andy Kerr have been of enormous assistance to us. And in Washington, D. C., one of our best friends is the Natural Resources Defense Council, where Faith T. Campbell has lobbied for our interests at the Federal level.

Our NPSO state network is getting larger and stronger. I am very glad that our Blue Mountain Chapter is again active and I welcome our new North Coast Chapter. I hope that both groups will appoint a Conservation Chair to work with me and my successor.

Here are a few of the issues that I think the NPSO should continue to support with letters and phone calls to the appropriate individuals:

1. Let's keep up our pressure on the state BLM to hire a full-time professional botanist at each of their eastern Oregon District Offices.

2. Let's keep writing to our legislators in Salem asking for state protection for our Oregon rare and endangered plants and animals.

3. And let's keep up pressure on our representatives in Washington D. C. for a stronger Federal Endangered Species Act with amendments which improve protection for plants.



Lomatium bradshawii

(Illustration from Hitchcock et al., *Flora of the Pacific Northwest*, used with permission from the publisher)

GOOD NEWS FROM EUGENE FOR LOMATIUM BRADSHAWII !!

The good news from Eugene is that the Amazon Park population of Lomatium bradshawii may produce some seeds this year!

For years our local NPSO chapter has been trying to protect a population of Lomatium bradshawii (USF&W Category 1) in Amazon Park, Eugene. One year soil was dumped on half the population for a community garden! The following year, the plants were mowed at the peak of the blooming season!

This year, alerted by a phone call from Emerald Chapter member Fran Moravesik, I phoned the City Parks Department in early April and asked for protection for the plants. Fran and I were able to show the City's head groundskeeper just where the plants grow and what they look like. The City responded positively with a promise that the area would not be mowed until after the Lomatium had a chance to set seed. The Register-Guard carried a front page story about the cooperative agreement between NPSO and the City with a nice colored photo of the Lomatium. So, Julie, if all goes well, this year you should be able to collect a few L. bradshawii seeds for the Seed Bank!

--Rhoda Love
Conservation Chair

WELCOME NEW OFFICERS

Retiring president, Herm Fritz, installed the following officers at the annual meeting in Ashland on May 11: President, Dr. Frank Lang; Vice-president, Susan Kofahl; Secretary, Florence Ebeling; Treasurer (second term), Marjorie Ettinger; new board members, Don Barr, Don Luoma Carolyn Wright. Under the direction of these officers and the support of the membership we will enjoy a good year.

NEW CHAPTER FORMED

The William Cusick Chapter which is based in La Grande and will draw members from Wallows, Union and Baker Counties has been formed in compliance with the by-laws. Welcome!

The Blue Mountain Chapter has been re-organized and reinstated.

WELCOME NEW CHAPTER OFFICERS

Three NPSO chapters have recently elected new officers. The results are as follows. Welcome!

BLUE MOUNTAIN	Pres.	Bruce Barnes
	V.P.	Hilda Tilgner
	Sec/Treas.	Harry Oswald
WM. CUSICK (La Grande)	Pres.	Andrew Kratz
	V.P.	Sandra Roth
	Sec.	Norm Cimon
	Treas.	Barbara Hettrick
CORVALLIS	Pres.	Tammy Mauer
	V.P.	Dan Luoma
	Sec.	Joan Glascock
	Treas.	Gary Hunt

LEGISLATIVE NOTES

A Brief Summary of State Laws for Plants

American law for conserving endangered plants and animals is derived from the older English law. In old English law animals were the property of the King; whereas in the U.S. they are regarded as the property of the "people", the government having the responsibility to protect the animals for the people. Plants on the other hand, in both the English and American law are broadly considered the property of the landowner. States have a broad range of powers to conserve wild animals, yet their main power for plant conservation is the police power. Even though the legal authorities responsible for protecting plants and animals may be different, the legal measures designed for conservation of plants and animals can be the same.

Thirty-five states presently have plant conservation laws which vary in degrees of protection afforded to the native flora. Several states laws dating from 1930's-1940's protect only plants near the highway. Washington, Idaho, New Mexico, Oregon, Massachusetts and West Virginia all have roadside protection laws.

Massachusetts was one of the earliest states to pass a law in 1918. It reads "the mayflower (*Epigaea repens*) shall be the flower or floral emblem of the commonwealth. Any person who pulls up or digs up a plant of the mayflower or any part thereof, or injures such plant or any part thereof except in so far as is reasonably necessary in procuring the flower therefrom, within the limits of any state highway or any other public way or place, or upon the land of another person without written authority from him, shall be punished by a fine of not more than fifty dollars; but if a person does any of the aforesaid acts while in disguise or secretly in the night time he shall be punished by a fine of not more than one hundred dollars." Even though it seems absurd to catch a plant thief in the night, many parts of this law are in our modern day plant laws.

The Massachusetts law today is more current and gives the authority to the state agency to list and protect endangered plants, yet does not give any guidelines. The New Mexico, California, and Arizona laws all have regulations for the taking of desert plants. Arizona has a system similar to deer hunting control by game departments. One must have a tag for each cactus to be collected and pay a fee.

A tag is put on the plant till sold. The Arizona Department of Agriculture is in charge of this program and enforcement is by the police.

The laws for protection of desert plant species are specific to that type of ecosystem. Each state must set up its laws for the best protection for their endangered and threatened species. Colorado added a provision to its natural areas law for a cooperative agreement between the state and federal government for grants with limited authority to study and manage only federally listed plants. Maine and Kentucky also include provisions for listing of rare plants in their laws governing natural areas. New Jersey, South Carolina, and South Dakota all have laws protecting certain species, but no state department has the authority for determining species status, regulations or enforcement.

The above laws were all passed prior to 1970 and the U.S. Endangered Species Act (E.S.A.) of 1973. The laws that have been passed since 1973 have primarily been designed to compliment the E.S.A.. These laws are among the most powerful. They define distinct categories of species, such as endangered or threatened and have a listing process defined. The listing process differs considerably from state to state. Yet each law prohibits "taking", except under regulated conditions. Some states allow for taking of plants for scientific use or by special permit.

Many of the state laws include regulations such as: commercial taking only with tags or seals, exceptions for biological research, acquisition of land for protection of species, landowner awareness of species, and regulations of nursery stock.

Even though many states have the basis for a good law for plant protection, certain exceptions in their bills weaken the overall effectiveness. One problem is giving exceptions to utility companies. This type of exception appears in the laws of California, Florida, Minnesota, Nevada, New Jersey, West Virginia, and Wisconsin. Other exceptions include agriculture, forestry, land clearing, fire control, and accidental taking. In total 19 states have exceptions written into their laws.

The penalties for violating the laws vary considerably. New York the maximum is \$25, in Rhode Island \$5,000. If the fine is higher and the enforcement taken seriously, there is a better chance for protection of listed species.

In spite of the number of flaws found in many of these bills it is possible to amend and to update bills. The incentive of the 4 to 1 matching of funds offered by the U.S.F.W. under the amendments of the Endangered Species Act will encourage states to fashion their bills after the E.S.A.

The above article is condensed from a longer article: McMahon, Linda. What is protection? The Tennessee Conservationist, Vol. L, March/April 1984, No. 2, p.5 -7.

The notes from the April 13 Legislative Committee Meeting are ready. If you would like a copy contact me.

Esther Gruber McEvoy
Corvallis Chapter

DESERT CONFERENCE VII: JUNE 6, 7 & 8

The 7th annual Desert Conference will be held at Central Oregon Community College in Bend. Field trips on Fri & Sat. will visit local wilderness study areas. An all-day Friday tour will examine rangeland management practices in central Oregon, including a visit to Pat and Connie Hatfield's High Desert Ranch and riparian areas on BLM's Prineville District. Saturday panel discussions will focus on different perspectives on management and use of rangeland resources. Natural history presentations are also planned. Sunday will be devoted to wilderness proposals, and conservation strategy. Registration is \$10.00. To obtain a registration form and more information contact Don Tryon, P.O. Box 450, John Day, OR 97845. (575-2671).

'ROOTS OF LIFE'

The excellent slide-tape program, 'Roots of Life', shown at the annual meeting in Ashland is available from the World Wildlife Fund. A copy of the program may be obtained (borrowed) from Jane MacKnight, World Wildlife Fund, 1601 Connecticut Ave., N.W., Washington, D.C. (202-387-0800). Enclose \$3.00 to cover the cost of mailing.

BLM OREGON WILDERNESS ENVIRONMENTAL IMPACT STATEMENT AVAILABLE

Some 950,000 acres of BLM-administered land in 41 areas, mostly in southeastern Oregon, would be recommended suitable for designation as wilderness in a BLM proposal covered in a draft environmental impact statement published April 30.

The proposed action is one of seven alternatives studied in the draft. The alternatives range from recommending that all 2,304,142 acres studied be suitable for designation as wilderness, to asking that no acreage be set aside for wilderness.

BLM will receive public comments on the draft until August 31. Thirteen Oregon hearings are scheduled in June and July to solicit public opinion. A one-hour informal discussion session will precede each of the hearings.

The public hearings schedule is as follows. All hearings are 7 p.m. to 10 p.m..

- June 18 Oregon Room, Madford BLM District Office
- June 19 Curry County Fairgrounds, Gold Beach
- June 20 Public Meeting Room, Klamath County Library, 126 S. Third, Klamath Falls
- June 26 Lakeview BLM District Office
- June 27 Harney County Museum Clubroom, Burns
- July 9 The Riverhouse, North Hwy. 97, Bend
- July 10 Courtroom Gallian County Courthouse, Condon
- July 11 So. Sherman Elementary School, Grass Valley
- July 16 Neese Bldg., Rm W-10, Treasure Valley Community College, Ontario
- July 17 Copper Kitchen Meeting Room, 480 Campbell (just off I-80), Baker
- July 18 Hoke Hall, Rm. 201, Eastern Oregon State College, La Grande
- July 23 Hearing Room Auditorium 2nd floor, Portland Bldg., 1120 SW 5th Ave., Portland
Also afternoon session, 2 p.m. to 5 p.m.
- July 25 City Council Chambers, 777 Pearl St., Eugene
- July 30 Utah Rm, Holiday Inn, 1000 E. 6th, Reno, NV.

Copies of the draft environmental impact statement are available for review in BLM's Oregon-Washington State Office, 825 NE Multnomah St., Portland, and in Oregon District Offices. A few copies are available from Team Leader Jerry McGee (OSO 935), BLM, P.O. Box 2965, Portland, OR 97208. (503-231-6256). Written comments on the draft statement should be sent to: Wilderness Studies (935), BLM, P.O. Box 2965, 97208.

A CHILLING TALE OF TWO STREAMS

BY DAN GUTHRIE

If ice is nature's dynamite, and cold her powder monkey, might winter end with a bang?

This is a tale of two streams.

Meadow Creek arises high in the Blue Mountains of northeastern Oregon. In cold years the shallow tributary of the Grande Ronde River freezes over not once but twice, with spectacular breakups occurring in December and again in May. Researchers from the U.S. Forest Service Range and Wildlife Habitat Laboratory at La Grande used a time-lapse camera to record one such breakup during the 1980-81 winter. Their film shows blocks of ice congealing as a white spell becalms the creek. In an instant the wintry sleep explodes, and dark water bearing engines of destruction rushes downstream, scouring banks along the way.

"Meadow Creek's banks are damaged even more by the surge of water than by the ice," said Larry Bryant, a wildlife biologist for the Forest Service Lab. He had just finished showing me the film last August and was prepping me for a tour of the site.

"Too many biologists see streams only in the summer. They don't visualize what happens in winter," he cautioned.

Bryant and others have been studying the impact of moderate grazing on Meadow Creek and its floodplain for the past 10 years. All their data are not in yet, but according to the lab's project leader, Jack Ward Thomas, "They're finding lots of things that everybody knows are true that aren't."

During the ride up Meadow Creek, Bryant pointed out a stand of ponderosa pines growing 40 yards back from the bank. Many of the trunks bore "catfaces," scars usually attributed to bear claws or fire.

"Ice did that," he said.

At the study area, where land bordering four miles of the creek has been fenced and cross-fenced for grazing experiments, he produced photographs taken yearly from the same points. They showed scanty clumps of mountain alders (*Alnus incana*) slowly adding shoots. There was little sprouting of new trees along the creek, not even in an ungrazed section.

In 1975 we planted 5,350 whips of willows (*Salix* sp.), black cottonwoods (*Populus trichocarpa*), and red osier dogwoods (*Cornus stolonifera*) along the creek. By 1973 there were 13 willows, three cottonwoods and one red osier dogwood left," he said, and pointed the finger of blame in three directions: wildlife ate them, ice uprooted them, and low summer flows dried them out.



Alnus incana

We walked along the creek. Its floodplain was dry but still grassy. Cattle are allowed to crop no more than 70 percent of the annual growth, and that, said Bryant, has tripled grass production since the project began, when intensive grazing was terminated.

We stopped to examine a clump of mountain alders debarked to a height of six feet.

"Looks like something was chewing on the trunks, doesn't it? Ice did that. Plates of ice stacked up against the alders, which caused water to flow around them and erode the bank. Sometimes riparian vegetation actually promotes erosion," he said.

"We've found that ice and high water, not cattle, cause most of the damage to Meadow Creek. If that's the case, why waste money building fences to protect streams like this one? Instead, we should be working to convince ranchers of the benefits of moderately grazing the riparian zone. You've seen some of the evidence. What do you think?" he asked.

* * * * *

Camp Creek is a tributary of the Middle Fork of the John Day River. Like Meadow Creek, it arises in the Blue Mountains near the 5,000-foot level. Like Meadow Creek, sections have been fenced for 10 years or more and their progress followed in the presence or absence of cattle. Like Meadow Creek, its flow registers extremes, going from two cubic feet per second in August to 250 at the peak of snowmelt.

But Camp Creek looks different, especially along the mile fenced for the past 14 years. There, in what is called "the old enclosure," the stream has narrowed and deepened; lush growths of mountain alders line its shores; and the once-dusty floodplain is marshy and shot with springs.

Please turn to page 70

Another NPSO chapter has been formed this year! The Wm. Cusick Chapter, based in La Grande, has drawn its membership from Union, Baker, and Wallawa counties. Currently, the chapter has about 15 members, but it is expected to grow soon to 20-25. Most of our members are new to the Society.

William Conklin Cusick - who was he? He was the eldest of five children of Scottish-Irish descent, who in 1853 at age eleven drove an ox-team most of the way from Illinois along the Oregon Trail to the Willamette Valley, where the Cusick family settled near Kingston.

William attended an academy, taught school, volunteered with the Union Army, and then returned to teaching until his hearing began to fail while he was in his mid-twenties. He tried market gardening.

In the fall of 1872, at age 30, William joined his brother in eastern Oregon where they settled on Cusick Creek in Thief Valley, Union County. Their ranch, located between the Blue and Wallawa Mountains, lay in the midst of an area that, botanically speaking, was virtually unexplored. Though his earliest collections were made about 1865, it was from this ranch that William Cusick really began his botanical career in 1873.

Cusick collected and pressed plant specimens which he sold. Those he had difficulty in identifying, he sent to Asa Gray or Charles Piper. Cusick's collection numbers went up to nearly 5000. He discovered dozens of species new to science, nearly forty of which were named after him.

For more than 40 years, Wm. Cusick made extensive botanical collecting trips, especially through the Blue and Wallawa Mountains, but also to Steens Mtn, Oregon's desert, Crater Lake, the Siskiyou, and the upper Willamette and Rogue Rivers. Nearly all of his collections were confined to Oregon, but he also made collecting trips to the Santa Rosa Mtns of Nevada, and the Seven Devils of Idaho.



Poa cusickii

(reproduced from Hitchcock et al., *Flora of the Pacific Northwest*, with permission from the publisher)

His health was often poor, but it seems that nothing could keep him from botany for long. He would head into the rugged peaks of the Wallawas alone, with his camping gear and plant presses loaded on a pony. Or, taking a horse team and wagon, he would head out into the desert to the south. Often his trips would last several weeks. He never carried a gun for protection, reasoning that the animals would leave him alone if he didn't bother them. Nor did he take fishing gear, for his dedication to botanical exploration left him no time to waste on fishing.

Cusick's last extensive trip was at the age of 60, when accompanied by his nephew H. G. Cusick he covered central Oregon, then the Southwestern region down to California, and finally returned via Crater Lake to the ranch.

In 1913, at age 71, he sold his personal herbarium to OSU and spent most of that winter in Eugene working over the specimens. But the next year, he missed his collection so much that he started a new one. By now he was quite deaf, and nearly blind due to cataracts (though surgery had restored partial vision in one eye). Yet he was busy making collections and sending off new specimens to Dr. Charles Piper for identification. In fact, he made 638 collections that year while living temporarily in the Old Soldiers Home in Roseburg.

Cusick continued to collect through 1916 when his last Aster collections were made near Union, where he then lived in town with his brother. By 1921, when Harold St. John visited Cusick in Union, his "second herbarium" contained about 3600 sheets. But by then Cusick had had a stroke and his eyesight had failed. He was no longer able to work on his specimens, so sold them to WSU.

Wm. Cusick died at his brother's home in Union in 1922, at age 80. Yet his name lives on as part of Oregon's history, geography, and botany. Many of Oregon's plants bear his name. At the headwaters of the Imnaha River in the Wallawas, stands Cusick Mountain. Now, in northeastern Oregon, a group of people calls itself the Wm. Cusick Chapter of the Native Plant Society of Oregon.

In naming our chapter after Wm. Cusick, we are paying tribute to a person who was truly an Oregon botanist. Though he had no formal education in botany (he was self-taught), his name became known to some of the best botanists half way around the world. William Cusick dedicated himself to the furtherance of botanical knowledge of Oregon. He was so devoted to Oregon's botanical exploration that even as an old man, when deaf and nearly blind, he continued to pursue his passion. That's dedication. Perhaps in having an NPSO chapter named after him, we will be reminded of that dedication and the valuable contributions that were still made by a self-taught, deaf, nearly blind old man. Perhaps too, something of Wm. Cusick's spirit will live on in each of us.

Andrew Kratz
President
Wm. Cusick Chapter

Camp Creek differs also in its fish populations. By 1976 the number of steelhead redds in the old enclosure had grown from 14 to 30 per mile. A cost-benefit analysis of the increase determined that, over 20 years, the extra steelhead were worth \$9,250 annually, after the expense of building and maintaining fences had been subtracted.

"I snowshoed in here every week during the 1979-80 winter," said Errol Claire as he jockeyed a pickup toward Camp Creek during the Christmas holidays. Claire is the regional fishery biologist for Oregon Department of Fish and Wildlife's John Day Office.

"That was the winter when temperatures dropped to 35 degrees below zero and stayed there. I wanted to compare what was happening in the old enclosure with the situation downstream where grazing was still allowed. The ice was half as thick and disappeared 45 days sooner in the old enclosure."

What about ice damage?"

"In the old enclosure? None," said Claire.

At Camp Creek we hiked through knee-deep snow to inspect a section protected from cattle since 1979. Mountain alders were staging a comeback but mostly the shores remained bare and the creek broad. Ice jutted out from its banks, in places forming a cover thick enough to walk on.

In the old enclosure just upstream was a different story. We saw no ice, only water running dark and deep between the alders. One explanation for the absence of ice, said Claire, were the springs feeding the creek: they warm it in winter and cool it in summer. In turn, roots of riparian plants create conduits so that floods raise the water table, producing still more springs. He suspected the alders of some wizardry in all this but would not elaborate.

We found one of the famous springs Watercress (*Rorippa nasturtium-aquaticum*) was growing in its 47-degree water. Claire placed a twig among the watercress and it disappeared beneath the snow in the direction of Camp Creek, where falling flakes had mantled the alders, turning their branches to wands.

"It may take a decade or more for protected streams to heal after generations of abuse," said Claire. "But they will recover if given time. You've seen both kinds. Which do you prefer?"

Dan Guthrie writes on fish and wildlife issues of the Columbia Basin for Oregon State University's Extension/Sea Grant Program.

LAWRENCE MEMORIAL GRASSLAND - NATURE CONSERVANCY

Seven Mid-Columbia Chapter members visited the Lawrence Memorial Grasslands on Sunday May 5th. We covered about 20 to 30 acres in the southeast corner of this Nature Conservancy preserve of 400 acres located near Shaniko. We were able to identify over 60 plants on the reference list provided to us, courtesy of Tammy Maurer. It was a beautiful sunny day for observing distant mountains as well as experiencing this rare native grassland habitat. The dominant bluebunch wheatgrass and Idaho fescue provided a lovely background for the many *Lomatium*, *Erigeron*, and *Phlox*. Also prevalent were *Phacelia*, *cheiranthoides*, *Hydrophyllum capitatum*, and *Balsamorhiza serrata*. *Gum triflorum* was another special treat observed. Squaw current (*Ribes cereum*) in peak bloom attracted many bees. We also enjoyed seeing a horned toad, many horned larks, vesper sparrows, white-crowned sparrows, chukars, and meadowlarks. The *Camea*, *Lupinus* spp. and *Allium* spp. were just beginning to bloom and we found some lavender violets, presumed *Viola adunca*, in a moist area. Having spent 4 hours in this unique land, we left with a feeling of deep appreciation to The Nature Conservancy for preserving this special area and encourage other members to investigate it for themselves.

Susan Kofahl, Mid-Columbia Chapter

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-5253 or (503) 221-3386.

Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.

Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0885 or (503) 221-2901 or (800) 452-1920.

Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-6446 or (800) 533-3203.

Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4011 or (503) 231-2300.

Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.

Congressman Penny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7888.

Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.

Jeff Simon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.

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Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.

Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

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 Membership in the Native Plant Society of Oregon is
 open to all. Membership applications & changes of
 address (including old address & zip code) should be
 sent to the membership chair.

BULLETIN

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 The NPSD Bulletin is published monthly. Its size is
 by the 10th of the month, & should be sent to the
 editors. News, articles, photos, drawings, & non-
 copyrighted material are welcomed.

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The Bulletin is not typeset; therefore typed,
 computer-ready copy is much appreciated. But
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 not typed. Please proofread & check facts.

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 affiliation (or other organization) are
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 standard paragraph treatment; one of these is
 suggested:

* for long articles, double space between
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 word of the paragraph

* for short articles or short paragraphs,
 when double spacing looks odd, indent
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 Type your own headlines, centered, all caps.
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 * author—specify whether byline is desired
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ILLUSTRATIONS: Black & white photos, ink
 drawings, woodcuts, halftones, et al. We
 welcome small drawings as well as larger
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SCIENTIFIC NAMES should follow Hitchcock &
 Cronquist's *Flora of the Pacific Northwest*
 where possible. Use of both scientific &
 common names is encouraged. Genus & species
 names are underlined & italicized.
REVIEWS OF ORIGINALS: Manuscripts & illustrations
 will not be returned unless it is
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The Bulletin is published as a service to
 NPSD members & the public. Your suggestions
 & comments are always welcome.

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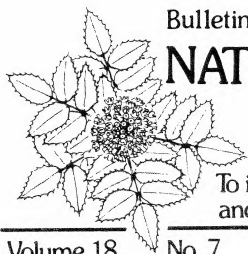
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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 7

July 1985

CHAPTER NEWS

Blue Mountain

- 6-7 July, Sat. Field trip, DUCK LAKE (eastern Wallawas), led by Rachel Sines. Meet at post
& Sun. office in Richland, OR, at 11:00 a.m.
20 July, Sat. Field trip, TOWER MOUNTAIN, led by Karl Urban. Meet at BMCC greenhouse at 8 a.m.

Corvallis

To register for field trips, please call Esther McEvoy (754-0893) or Dan Luoma (758-8063).

- 31 Aug.-2 Sept., Field trip over Labor Day weekend (confirmed) to STEENS MOUNTAIN with Northern
Sat. - Mon. Nevada Native Plant Society members; led by Carolyn Wright.

Emerald

- 6 July, Mon. Workshop, 7:15 p.m., Rm. 121, Science II, UO campus. SEDGE IDENTIFICATION, with
Chester Wilson, a UO Graduate student studying bogs of the E slope of the Cascades.
Bring hand lens, Hitchcock, and a dissecting kit. Microscopes will be provided.

High Desert

--- For information about July activities, call Chapter President Marge Ettinger, 382-2255.

Mid Columbia

- 3 July, Wed. Meeting, 7:30 p.m., Mosier School.

North Coast

--- For information about July activities, call Richard Smith, 842-4324.

Portland

Please call the trip leader or Lois Kemp (760-4998), if there are any questions about a field trip.
Bring lunch, liquids, and all-weather clothing for the trips.

- 29 June, Sat. Field trip, COAST RANGE, KIDDER BUTTE. George will take us where the flowers are.
Meet at OMSI parking lot, 8 a.m. Leader: George Lewis, 292-0415.
6-7 July, Sat. Field trip, LOGAN VALLEY, Malheur N.F., a high elevation meadow. Meet at 9 a.m. at
& Sun. Indian Springs Road in Seneca, about 40 mi. N of Burns on Hwy. 395 (about 900 mi.
round trip from Portland). We will camp at Big Creek C.G. at the E end of Logan Meadow.
Leader: Glenn Walthall, 644-0745.

- 9 July, Tues. Meeting, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson. FASCINATING FLORA: HOW PLANTS CAME TO BE IN OREGON & HOW THEY GOT THEIR NAMES; slide program by Sharon Blair.
- 13 July, Sat. Field trip, PACIFIC CREST TRAIL FROM LOLO PASS NORTH. The flowers we will be seeing are within 1½ mi. from the trailhead, or can walk for 6 mi. if you wish. Meet at 8 a.m. at K-Mart, NE 122nd & Sandy Blvd. (exit I-84 off I-205 at 122nd N-bound), S end of parking lot, or meet leader at Zigzag Ranger Station parking lot at 9 a.m. Leader: Herm Armen-trout, 658-2751.
- 20 July, Sat. Field trip, BLACK WOLF MEADOWS, re-scheduled. We will try again--the snow should be gone. Meet at K-Mart, SE 82nd, Milwaukie Expressway, SW corner of parking lot, at 8 a.m. Leader: Louise Godfrey, 223-4785.
- 27 July, Sat. Field trip, BLUFF MOUNTAIN, WASHINGTON. Get to know your neighbor--the Suksdorfia Chapter, Washington Native Plant Society, in Vancouver, invite us to a field trip in a interesting, little-botanized area just E of Silver Star. Meet 8 a.m. in Vancouver at Fred Meyer, Mill Plain Blvd. exit off I-205, NE end of parking lot; or 9:30 a.m. at Sunset Camp Ground, Gifford Pinchot N.F. Leader: Lois Kemp, 760-4998.

Siskiyou

- 5-7 July, Fri.-Sun. LAVA BEDS NAT. MONUMENT & THE MEDICINE LAKE COUNTRY of Modoc N.F. This will be a car camping trip into NE California and will take in some excellent bird watching at Tule Lake Nat. Wildlife Refuge. We will be traveling through basin & range and lava upland country. There will be opportunities to visit or explore lava tubes, ice caves, craters, obsidian flows, 1 or 2 mountain peaks, & a couple of beautiful lakes (possibly with good fishing). There are some real botanical treats on this trip as well. We can expect to see plant communities not represented on our side of the Cascades. This trip suitable both for the laid back campers and the real go getters. Also it is possible to join us for the first day only. To make arrangements call trip leader Wayne Rolfe before June 28 at 482-0093.
- 20 July, Sat. GUMBOOT LAKE. An all day trip to the Mt. Eddy area of N Calif. There should be nice scenery as well as excellent botanizing, including serpentine species. We hope to see Dodecatheon alpinum, Dicentra uniflora, Calochortus, & many other plants in bloom. This will be a long drive with some hiking after we get there. Meet at Medford K-Mart at 7:30 a.m., Ashland Bi-Mart at 8 a.m.; led by Joe Shelton, 773-1238.
- 27 July, Sat. COOK & GREEN PASS AND LAKE MOUNTAIN. The primary focus of this trip will be trees & shrubs. Expect to see Baker's cypress, Brewer's spruce, & many other firs & pines. We will try to have a picnic lunch at Cook and Green Pass and then go down on the Klamath River and up to Lake Mountain to see Foxtail pine in the northernmost extension of its range. This trip will involve less than a mile of hiking. Leave Ashland Bi-Mart at 8 a.m., Medford K-Mart 8:30 a.m.; led by Frank Callahan, 855-1164.
- 10 Aug., Sat. RABBIT EARS & HERSHBERGER LOOKOUT. This trip will botanize its way to Rabbit Ears, which is an old volcanic plug, looking for Collomia mazama. Then we will go on to Hershberger Lookout to see the rare Cascade erigeron, Erigeron cascadiensis. Enjoy your lunch overlooking the Rogue Valley. Meet at 8 a.m. at Ashland Bi-Mart, 8:30 at Medford K-Mart, & 9:50 at Beckie's Cafe at Union Creek on Hwy. 62. Led by Cindy Cripps, 560-3770.

Willamette Valley

- 13 July, Sat. Field trip, IRON MOUNTAIN, with Audubon Society. Meet for carpooling at S Salem K-Mart, 7:30 a.m. Leader: Jerry Smith, 393-3863.
- 20 July, Sat. Field trip, OPAL LAKE DRAINAGE. Meet for carpooling at S Salem K-Mart (Mission St.), 7:30 a.m. Leaders: the Eubanks, 390-2257.
- 27 July, Sat. Field trip, BATTLE AXE MOUNTAIN. Carpool at Gingerbread House on Hwy. 22 near Mehama, 8 a.m. Leaders: George & Harriet Schoppert, 859-2613.
- 3-4 Aug., Sat. & Sun. Overnight to CRATER LAKE. Sign up before July 15 for cabin reservations. Camping is also available. Leader: Clint Urey, 743-2802.

Wm. Cusick

A field trip schedule is being worked out, including trips to Marble Canyon near Baker, & to proposed Indian Creek RNA in the Wallows, as well as a loop drive around the Wallows. For latest details, contact Andrew Kratz at 963-9358.

#

JEAN SIDDALL RECEIVES UO DISTINGUISHED SERVICE AWARD

Jean L. Siddall, our Rare and Endangered Plant Committee State Chairman, was the recipient of one of the three Distinguished Service Awards for 1985 given by the University of Oregon at Spring Commencement, June 16. According to Paul Olum, President of the University of Oregon, "these awards are presented only to those persons 'who by their knowledge and skills have made a significant contribution to the cultural development of Oregon or society as a whole.'"

Although Jean is perhaps best known as the Director of the Oregon Rare and Endangered Plant Project and as one of the founders of Tryon Creek State Park, she has also helped to establish the Rae Selling Berry Botanic Garden, the Seed Bank for Oregon Rare and Endangered Plants, the Leach Garden Friends, the Wetlands Conservancy, and the Oregon Natural Areas Inventory of The Nature Conservancy, now the Oregon Heritage Program. She has been an active member of The Mazamas, earning her Sixteen Major Northwest Peaks award in 1974.



BLM OREGON WILDERNESS ENVIRONMENTAL IMPACT STATEMENT AVAILABLE

Some 950,000 acres of BLM-administered land in 41 areas, mostly in southeastern Oregon, would be recommended suitable for designation as wilderness in a BLM proposal covered in a draft environmental impact statement published April 30.

The proposed action is one of seven alternatives studied in the draft. The alternatives range from recommending that all 2,304,142 acres studied be suitable for designation as wilderness, to asking that no acreage be set aside for wilderness.

BLM will receive public comments on the draft until August 31. Thirteen Oregon hearings are scheduled in June and July to solicit public opinion. A one-hour informal discussion session will precede each of the hearings.

- July 9 The Riverhouse, North Hwy. 97, Bend
- July 10 Courtroom Gilliam County Courthouse, Condon
- July 11 So. Sherman Elementary School, Grass Valley
- July 16 Weese Bldg., Rm W-10, Treasure Valley Community College, Ontario
- July 17 Copper Kitchen Meeting Room, 480 Campbell (just off I-80), Baker
- July 18 Hoke Hall, Rm. 201, Eastern Oregon State College, La Grande
- July 23 Hearing Room Auditorium 2nd floor, Portland Bldg., 1120 SW 5th Ave., Portland
Also afternoon session, 2 p.m. to 5 p.m.
- July 25 City Council Chambers, 777 Pearl St., Eugene
- July 30 Utah Rm, Holiday Inn, 1000 E. 6th, Reno, NV.

Copies of the draft environmental impact statement are available for review in BLM's Oregon-Washington State Office, 825 NE Multnomah St., Portland, and in Oregon District Offices. A few copies are available from Team Leader Jerry McGee (OSO 935), BLM, P.O. Box 2965, Portland, OR 97208. (503-231-6256). Written comments on the draft statement should be sent to: Wilderness Studies (935), BLM, P.O. Box 2965, 97208.

FLOWERS FOREVER

by Rhoda Love

As most Bulletin readers must know, the Native Plant Society of Oregon has, for several years, been beseeching the Bureau of Land Management to hire a full-time, professional botanist at each of its eastern Oregon District offices--Burns, Vale, Prineville and Lakeview. I don't know whether NFSOers are aware of how much public land in Oregon is managed by the BLM. The figures are startling to say the least. Total public land statewide managed by the Bureau amounts to approximately SIXTEEN MILLION ACRES! West of the Cascades, the Bureau is responsible for watching over about 3 million acres, and ON THE EAST SIDE, THE BLM MANAGES THIRTEEN MILLION ACRES OF PUBLIC LAND!! That's your land and my land! Most of Oregon's rare and endangered plants grow on BLM land and so I don't think it's unreasonable to expect an agency with this much responsibility to hire at least 4 full-time professionals to look out for plants, do you? This still would make each botanist responsible for from 3 to 4 million acres of land! At present, only seasonal employees are watching over our rare plants on all those millions and millions of acres.

Below is my latest letter to William G. Leavell, Director of the Oregon BLM. If you agree with the points raised in my letter, please write to Mr. Leavell and express yourself on this important issue. We have heard from many sides that federal agencies DO respond to public pressure, and the NFSO is the only statewide organization which is in a position to speak up strongly in support of Oregon's rare plants. Read my letter, and write today. Flowers forever!

William G. Leavell,
State Director
Bureau of Land Management
Oregon State Office
825 NE Multnomah St.
P. O. Box 2965
Portland, Oregon 97208

Dear Mr. Leavell:

Thank you for your letter of January 3, 1985, in which you replied to several points raised in my earlier letter to you. I appreciate your staff's taking the time to address my specific concerns.

The Native Plant Society of Oregon feels strongly that the \$162,600 which was spent on T/E plants on BLM land during the fiscal year 1984 is inadequate. Because we feel that, in general, federal budgets

for rare plant protection are too low, we are working closely with the Natural Resources Defense Council in Washington D.C. in lobbying for increased federal expenditures for rare plants under the Endangered Species Act for the coming fiscal year.

Specifically in Oregon however, it is still our very strong position that the BLM must have full-time professional botanists at each district office and we feel that, at the Vale, Burns, Prineville and Lakeview districts this can best be managed by converting one Range Conservationist position in each district to a Botanist position.

We know of highly-trained professional botanists with impressive credentials and vast experience in the east-side flora who would be available to step into such positions if they were created.

As for our society giving volunteer time to plant studies for the BLM -- gladly -- but to cooperate with your full-time professionals, not as substitutes for them!

As a matter of fact, NFSO members will be visiting BLM Wilderness Study Areas in eastern Oregon this summer and you will receive our reports. (These visits are being organized by Barbara Fox of our Society.) However, our people are only too aware that weekend visits cannot substitute for professional, year-round study. A professional botanist can coordinate the work of employees and volunteers efficiently. He/she can keep on-going records and spend winter months analysing data and planning the coming season's work. No volunteer program -- no matter how sincere -- can substitute for the work of a professional.

A case in point is the plant *Stephanomeria malheurensis*, one of only 3 species in Oregon which is on the Federal T/E list. I believe that with a full-time botanist monitoring this species and its habitat that it would not now be reduced to the very brink of extinction.

Let me close by reiterating that the NFSO, with over 600 members statewide, strongly urges the state BLM to create full-time botanist positions in each of its Oregon districts, and to remind you that the Bureau has a Federal directive to manage T/E plant species and that we do not believe that you can adequately do so with a \$162,000 budget, summer help and volunteers.

Yours sincerely,

Dr. Rhoda M. Love,
Conservation Chair
Native Plant Society of Oregon

BLM STATE CHIEF RESPONDS TO NPSO CONCERNS

Dear Dr. Love:

We certainly agree with you that fulltime professional botanists are an integral part of a successful T/E plant program. In an attempt to reach this goal, we have encouraged our district offices to canvass employees with the objective of finding someone presently employed who is qualified and interested in taking on the botanical responsibilities. Presently, a hiring freeze is in effect that may eliminate the possibility of employing someone from outside BLM.

Besides the above, we are taking some other affirmative actions to increase our botanical capability in eastern Oregon districts. Following are some of the planned and/or ongoing personnel actions to hire full-time professional botanists, as well as highly qualified seasonal employees that are scheduled this fiscal year:

Burns District

A botanist position will be advertised in the near future. This position is presently being reviewed by the Oregon State Office personnel staff for classification. We plan to fill this position at the earliest opportunity. In the meantime, Richard D. Hall, a range conservationist on the Burns District, has been assigned the T/E plant program. He has been working with Drs. Robert Parenti and Carl Holte (sic) and is well respected by both.

Also, Caroline Lindstedt has been hired on a seasonal appointment to work with the T/E plant program.

We can assure you that Stephanomeria malheurensis will receive close monitoring and possibly some attempt to reduce plant competition this summer. All efforts to improve the habitat conditions for this plant will be coordinated with Dr. Robert Parenti.

Vale District

Elaine Joyal was hired about May 1 to work for a 4-5 month period as district botanist. Elaine is well qualified. She made a major find in 1984 when working in the Vale District on a volunteer visit. She rediscovered Amsinckia carinata, a plant species last observed in the late 1800's. The plant had been searched for on numerous occasions through time but never loc-

ated. She restudied the documented history of the original discovery and relocated the plant.

Joe Duft, a botanist working for BLM in Idaho, has been assisting the Vale District this spring on their T/E program. He has been able to provide the assistance necessary until Elaine reported.

Prineville District

Ron Halverson, a range conservationist, was reassigned in March 1985 from the resource area staff to the Division of Resources and assigned full time to the monitoring and T/E species programs. Already he has obtained volunteer assistance, been attending society meetings and developed a positive rapport and association with the T/E plant program.

Lakeview District

Stephen Shelley (sic) and Ginger King are being hired on a seasonal appointment to work with the T/E plant program in Lakeview. Both have worked for BLM before.

We feel that we are adequately handling the T/E plant program within the constraints of the T/E species budget and position allocations. Currently, the continuity of the T/E plant program in eastern Oregon will focus on the botanist located in Burns. The other districts will supplement this core leadership with seasonal botanists and current district employees assigned the T/E program. If we find this organizational structure will not work, we will modify it so it does work.

Thank you in advance for your assistance and the volunteer efforts that many of your members will be performing this summer through visits to BLM wilderness study areas and subsequent botanical reports. We consider your role as vital to a successful, long range, T/E plant program in Oregon.

In summary, we will have 2 permanent and 4 temporary botanists involved in the T/E program this year. These people are all highly qualified to perform botanical related work. In addition, it should be recognized that our 39 range conservationists and some other specialists have the background to assist in the management of the botanical resources on the public lands.

Sincerely,

/s/ William G. Leavelle

BLM WILDERNESS STUDY AREA FIELD TRIPS

Contact trip leader or Barbara Fox (659-2445) to register or for information about a trip.

July 4 (Thur) thru July 7 (Sun) Field trip to the Steens Mountains, and Blitzen River area. Camp at Fish Lake, day hikes to Wildhorse Lake (road/snowpack permitting), Blitzen River, Kiger Gorge rim, and Fish Creek. Call Barbara Fox (659-2445) for details.

July 20 & 21 (Sat & Sun) Field trip to Pueblo Mountains, located south of the Steens Mountains on the Nevada/Oregon border. The trip will concentrate on the eastern portion of the WSA, a portion BLM has recommended for non-wilderness status. Vegetation is primarily shrub-bunchgrass, with trees limited to riparian areas; topography is typical of Basin & Range fault blocks. We will be at elevations from 4200' to 7500'. Saturday will be an all day hike, Sunday will be half or all day depending on participants choice. Contact Carolyn Wright at Rt. 1 Box 55, Dufur, OR 97021 or leave message at 467-2218.

HIGHLIGHTS OF BOARD MEETING

Ashland - May 12, 1985

Legislative Report

Work has begun on a draft of a bill that will offer better protection to Oregon native plants. The committee has agreed that the Oregon Department of Fish and Wildlife is the best agency to oversee the program.

The committee is keeping track of 3 bills.

HB 623 - Standards for protecting natural resources.

SB 623 - Requires the State Board of Forestry to adopt rules protecting resources identified in the planning of LCDC.

SB 344 - Deals with spraying of herbicides on road-sides.

Ms. McEvoy has been informed that it is likely these bills are dead for this session.

Walker Creek Wetlands

This is the area where the City of McMinnville plans to build a dam, it is also the limited site of the rare *Sidalcea nelsoniana*. This area is being surveyed by botanists and a consensus on this information should be reached by the end of summer. The Dept. of Fish and Wildlife has a seed gathering program and may attempt to establish the plant in a suitable area.

Bulletin Editor Report

Angie Evenden has been editing the Bulletin while Julie Kierstead is on leave. The Board received a letter of resignation to be effective at the end of the year from Julie. The Board accepted the resignation and cast a vote of appreciation to Julie for her fine work.

Wildflower Seed Collecting

NPSO was offered the opportunity to collect specified seeds for commercial distribution. It was found by the investigating committee that there was little support for the Society to participate. No opposition was given for individuals who want to participate.

Conservation Chairperson Resigns

Rhoda Love is resigning her position as chairperson of the Conservation Committee because of travel plans of the family. A new chairperson will be appointed.

Conservation Committee Report

- Veva Stansell is working to protect the Curry Co. beach habitat.
- Rhoda Love attended and testified at the Jan. 14 hearing regarding the closure of some Lane Co. beaches which have suffered from overuse and abuse.
- NPSO joined with ONRC to visit BLM offices in March to investigate the thoroughness of the surveys for rare plants on timber sales.
- Rhoda Love and Stewart Garrett conduct a campaign to have a full-time botanist appointed at the Burns office - one is promised.
- Flower show guidelines developed and published in the Bulletin.
- Herb Gather's Association has been operating in Oregon under permit. There is concern over gathering

practices and what is being gathered. Wayne Rolle will spearhead this issue and develop some guidelines to present to the proper authority.

g. Rhoda Love received and agreement from the City of Eugene to not mow the Amazon Park area where the rare Lomatium bradshawii grows until after seed dispersal.

New Chapter Formed

The William Cusick Chapter which is based in La Grande and will draw members from Wallowa, Union and Baker has been formed in compliance with the by-laws. The Blue Mountain Chapter has been reorganized.

Desert Wilderness Study Areas

Barbara Fox needs helpers to read the BLM Draft EIS before the hearings in July. Volunteers contact Barbara, 659-2445.

New Officers For NPSO

Retiring president, Herm Fritz, installed the following officers at the annual meeting in Ashland on May 11: President, Dr. Frank Lang; Vice-president, Susan Kofahl; Secretary, Florence Ebeling; Treasurer (second term) Marjorie Ettinger; new board members, Don Barr, Dan Luoma, Carolyn Wright.

In Memorium

J. Donald Kroecker died March 7, 1985. He was a graduate of Oregon State University and practiced mechanical engineering in Portland. Some will remember his program about beautiful and not so beautiful Portland. Portland Chapter remembers him as a charter member, lover of native plants, especially the lilies of Oregon.

Florence Ebeling
State Secretary

HELP WANTED

NPSO needs several persons to help with the distribution and marketing of the new Wildflowers of Oregon poster. We need to contact businesses (gift shops, garden clubs, book stores, tourist attractions, etc.) to show our poster and interest them in selling it. We would like to have sales outlets throughout the state. Proceeds from the sales of these posters will assist us with work to conserve threatened and endangered plant species. If you would be willing to contact potential retail outlets in your area please call or write to:

Alan B. Curtis
2370 Douglas Drive
Eugene, Oregon 97405
phone 345-2571

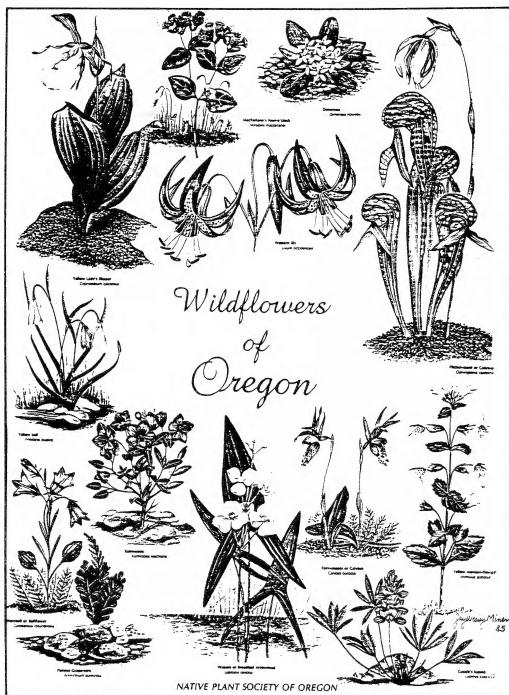
NPSO WILDFLOWER POSTER AVAILABLE

The Native Plant Society of Oregon has just produced a full-color poster featuring stunning paintings of thirteen Oregon wildflowers. Included among the brightly-colored original paintings by Oregon artist Jay Wesley Miner are: cobra lily (*Darlingtonia californica*), yellow lady's slipper (*Cypripedium calceolus*), Kalmiopsis (*Kalmiopsis leachiana*), plus nine other beautiful and colorful species. Many of the flowers illustrated are on the Oregon Rare & Endangered plant list. This beautiful poster will brighten up a home, office, or classroom, and will help increase appreciation for Oregon's natural heritage.

The large (18" X 24") poster is on heavy paper and is printed in full color. Information about each species illustrated is included. Coast of each poster is \$4.95. Posters are mailed rolled in a mailing tube. To order a single poster, send a check for \$4.95 along with your name and address to:

NPSO Wildflower Poster
2370 Douglas Drive
Eugene, OR 97405

Checks should be made out to the Native Plant Society of Oregon. NPSO Chapters may purchase posters at a reduced price for resale to their members at Chapter meetings. Inquiries are invited from dealers and businesses; discounts are available when posters are purchased in lots of ten or more.



BLM-FOREST SERVICE SEEK COMMENTS ON SWAP BY JULY 8

WASHINGTON, D.C.--Detailed and updated descriptions of a proposal to interchange land and mineral responsibilities between the U.S. Dept. of Agriculture's Forest Service (FS) and the U.S. Dept. of Interior's Bureau of Land Management (BLM) were announced June 7 by the two agencies.

FS Chief R. Max Peterson said the release of State and national summaries of the proposed implementation guides begins a 30-day period during which the public may comment either in writing or in person to help shape the two agencies' proposal to Congress. The summaries, as well as an outline of concepts to be considered in legislation by Congress, are available from the headquarters of the two agencies and from all of their field offices across the country, Peterson said. Copies are also being mailed to organizations and individuals who previously requested them.

The proposal, announced last January and further developed over the last few months in consultation with

the public through a series of public meetings, is to interchange about 35 million acres of land between the two agencies and transfer from the BLM to the FS responsibility for managing federal minerals within the FS's area of jurisdiction.

In addition to the summary documents, the public also may review the complete, detailed individual State and regional guides from which the summaries are drawn. This may be done in appropriate BLM State Offices, Forest Service Regional Offices, or either agency headquarters during weekday business hours, according to BLM Director Robert Burford.

Written comments should be sent to BLM/Forest Service Interchange, P.O. Box 21219, Washington, D.C. 20009-0719 by July 8. All comments received by July 8 will be analyzed before the two agencies submit their legislative proposal for Congressional action.

13TH ANNUAL OREGON NATURAL RESOURCES CONF.
Sept. 13, 14, & 15--Coos Bay

Mark your calendar now and come to the coast for the 13th annual Oregon Natural Resources Conference, to be held at Southwestern Oregon Community College in Coos Bay. This conference, which is the Oregon Natural Resources Council's major public educational event, has become renowned as one of Oregon's most informative and enjoyable annual programs.

Major conservation and political leaders, including ONRC's staff, will be speaking on (or presenting workshops on) recent research on old growth forests, scenic river designation, and other natural resource topics including mining threats, dam proposals, and many other issues of concern in southwestern Oregon and statewide. The conference, which will begin Friday evening, will include a salmon banquet dinner Saturday night.

The Oregon Natural Resources Council has picked this location because of the organization's increasing role in protecting Oregon's coastal resources, including issues related to: statewide coastal barrier protection, off-shore oil and gas leasing, off-road vehicles, and coastal fisheries. Also, this coastal location provides unparalleled opportunities for Saturday afternoon field trips to outstanding natural areas, including the Oregon Dunes NRA, South Slough Sanctuary, and the New River Area of Critical Environmental Concern (ACEC) south of Bandon.

ONRC is also attempting to keep participants' costs to a minimum. All meals are reasonably priced and sleeping bag space and self-contained trailer parking will be available at SWOCC. Also inexpensive dormitory rooms will be available at Oregon Institute of Marine Biology nearby at Charleston. Of course, you may also take advantage of local area motels and campgrounds. An agenda and registration materials will be available the middle of August. If you are not already an ONRC member, please write for details: ONRC 13th Annual Conference, 1161 Lincoln St., Eugene, OR 97401; or call 344-0675. See you in Coos Bay!

Dodecatheon hendersonii
drawing by Julie Kierstead



T-SHIRTS RESTOCKED

We have reordered most of the colors and designs since the "great T-shirt sellout" at the annual meeting in Ashland. Please note: long sleeved shirts in grey (M, L) or lavender (all sizes) have Julie Kierstead's *Opuntia polyacantha* design. Short sleeved shirts available: *Delphinium leucophaeum* (turquoise) and *Lomatium cookii* (yellow) by Gaylee Goodrich; *Darlingtonia californica* (lavender) by Linda Vorobik; and *Opuntia polyacantha* (grey). There are still a few white with green NPSO emblem (M) at \$6.75. All shirts are preshrunk 100% cotton, men's sizes S, M, L, XL, except as noted. Short sleeve shirts are \$7 each; long sleeved \$10. Please include \$1 each for postage and indicate size, color, plus second choice if acceptable. Make checks payable to Emerald Chapter NPSO. Order from:

Evelyn Everett
4135 Alder St.
Eugene, OR 97405; 345-1746



Mimulus cardinalis
drawing by Julie Kierstead

PLEASE SEND SEEDS

Englishman Will McLewin would like to receive seeds of native *Erythronium* and *Dodecatheon* species, for use in his research into the two genera. The seeds should be wild-collected, of certain ID, and accompanied by precise locality information. They can be sent to him at this address:

Will McLewin
42 Bunkers Hill, Romiley
Stockport SK6 3DS
England

or send the seeds to Faith Mackaness, 36141 Hurlburt Rd., Corbett, OR 97019.

STATE OFFICERS

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393 FulVee Dr., Eugene, OR, 97405; 345-6241
Legislative Chair Esther McElvey
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BLM Resident Wilderness Coordinator Barbara Fox
11455 SE 35th, Milwaukie, OR, 97222; 659-2445
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Emerald (Eugene area) Leighton Ho
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MEMBERSHIP

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Membership in the Native Plant Society of Oregon is
open to all. Membership applications & changes of
address (including old address & zip code) should be
sent to the membership chair.

BULLETIN

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. Angie Evenden
P.O. Box 9338, Portland, OR, 97207; 246-8646
The NPSO Bulletin is published monthly. Copy is due
by the 10th of the month, & should be sent to the
editors. News, articles, photos, drawings, & non-
copyrighted material are welcome.

GUIDELINES FOR CONTRIBUTORS

The Bulletin is not typeset; therefore typed,
camera-ready copy is much appreciated. But no
submission will be rejected because it is
not typed. Please proofread & check facts.

DEADLINE: 10th of each month

FORMAT: Copy should be typed in 1/4 inch wide
columns, of any length. Author's name & chap-
ter affiliation (or other organization) are
typed at the end of the article. There is no
standard paragraph treatment; one of these
is suggested:

* for long articles, double space between
paragraphs, but do not indent the first
word of the paragraph

* for short articles or short paragraphs,
when double spacing looks odd, indent
the first word of the paragraph instead
Type your own headline, centered, all caps.
In case of special formats, e.g. plant keys,
you are free to choose the layout.

CREDITS: For each submission, provide

* title

* author—specify whether byline is desired
for news items

* instructions as to whether item is to be
used in entirety or excerpted at editor's
discretion

* source & date if item is not original
ILLUSTRATIONS: black & white prints, ink
drawings, woodcuts, halftones, et al. We
welcome small doodles as well as larger
efforts. Please give source & date, if not
original.

SCIENTIFIC NAMES should follow Hitchcock &
Cronquist's Flora of the Pacific Northwest
where possible. Use of both scientific &
common names is encouraged. Genus & species
names are underlined or italicized.

RETURN OF ORIGINALS: Manuscripts & illustra-
tions WILL NOT be returned unless it is
requested.

The Bulletin is published as a service to
NPSO members & the public. Your suggestions
& comments are always welcome.

#

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

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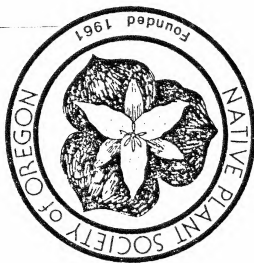
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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 8

August 1985

CHAPTER NEWS

Blue Mountain

For information about August activities, call Chapter President, Bruce Barnes, 276-5947.

Corvallis

To register for field trips, please call Esther McEvoy (754-0893) or Dan Luoma (758-8063).

31 Aug.-2 Sept. Field trip over Labor Day weekend to STEENS MOUNTAIN with Northern Nevada Native Plant Society members; meet at Fish Lake Campground, 10 a.m. Saturday morning. Leader: Carolyn Wright, 467-2218.

Emerald

12 Aug., Mon. Workshop, 7:15 p.m., Rm. 121, Science II, UO Campus. GRASS IDENTIFICATION, with Warren Pavlat. Bring hand lens, Hitchcock, and a dissecting kit. Microscopes will be provided.

High Desert

August field trip to BROKEN TOP and TODO LAKE. Call Stu Garrett for time and details, 389-6981.

Mid Columbia

7 Aug., Wed. POTLUCK at Susan Kofahl's home, beginning at 5 p.m.. Call 478-3576 if you need directions.

North Coast

For information about August activities, call Richard Smith, 842-4324.

Portland

We would like to thank Sam Johnson of NW Field Office of The Nature Conservancy, who on very short notice filled in for the scheduled speaker for the July 9 program. Sam presented 'Garden of Eden' a film about the need for preservation of natural diversity.

Please call the trip leader or Lois Kemp (760-4998), if there are any questions about a field trip. Bring lunch, liquids, and all-weather clothing for the trips.

3 Aug., Sat. Field trip, MT. ADAMS, UPPER HELLROARING CREEK. Meet at north end of Hood R. Bridge or at Hood River Inn at 8:30 a.m.. Leader: Keith Chamberlain, 478-3314.

10 Aug., Sat. Field trip, MULTNOMAH BOG, MT. HOOD. Meet 8 a.m. at Dept. of Motor Vehicles (DMV), NE 60th and Glisan; or 9 a.m. at Zigzag Ranger Station. Lois Kemp, 760-4998.

17 Aug., Sat. Field trip, NETARTS SPIT, trip to Indian Village site. Up to eight miles roundtrip, bring water. To share rides meet at OMSI parking lot at 8 a.m.; or to meet leaders at Cape Lookout parking area at 9:30 a.m. Leaders: Jean Siddall, 636-4633, and Mary Lou Thomas.

20-22 Aug. Field trip, MT. RAINIER. For more information and to make arrangements, contact trip leader as soon as possible. Leader: Joyce Beeman, 639-3343.

Siskiyou

- 10 Aug., Sat. Field trip, RABBIT EARS & HERSHBERGER LOOKOUT. This trip will botanize its way to Rabbit Ears, which is an old volcanic plug, looking for Collinsia nazana. Then we will go on to Hershberger Lookout to see the rare Cascade erigeron, Erigeron cascadenensis. Enjoy your lunch overlooking the Rogue Valley. Meet at 8 a.m. at Ashland Hi-Mart, 8:30 at Medford K-Mart, & 9:50 at Beekie's Cafe at Union Creek on Hwy. 62. Led by Cindy Cripps, 560-3770.

Willamette Valley

- 2-4 Aug., Sat. & Sun. Field trip, CRATER LAKE. Meet at Park Headquarters at 9 a.m. both days. For information contact Clint Urey, 743-2802.
- 10 Aug., Sat. Field trip, CANYON CREEK with the Audubon Society. Six miles roundtrip, moderate hike. Carpool at S. Salem K-Mart, Mission St., 7:30 a.m.. Leader: Jerry Smith, 393-3863.
- 17 Aug., Sat. Field trip, MT. HOOD AREA. Carpool at S. Salem K-Mart at 7:00 a.m. Leader: Bill Egan, 393-2131.
- 24 Aug., Sat. Field trip, CASCADE FLOWERS. Carpool at So. Salem K-Mart at 7:30 a.m. Leaders: Wally and Heike Euhanks, 390-2257.

Wm. Cusick

For information about August activities, call Andrew Kratz at 963-9358.

JEAN DAVIS AWARD GIVEN

The Jean Davis Memorial Scholarship has been awarded to Diana Louise Petersen of Oregon City and Karen Slonika of Salem. Diana will be attending Linfield College in McMinnville and Karen will attend Oregon State University in the coming school year. Congratulations to both Karen and Diana!

SIDDALL RECEIVES POSTER FROM NPSO

On June 16, Jean Siddall, NPSO's Rare and Endangered Plant Committee State Chairman received a Distinguished Service Award at the commencement ceremony at the University of Oregon. At a gathering at the home of Stan and Joan Cook following the University ceremony, Jean received another award for her work on behalf of Oregon flora.

Alan Curtis, Emerald Chapter member and Chairman of the NPSO Poster Committee, presented Jean with a matted and framed copy of our brand new "Wildflowers of Oregon" poster. The poster features full-color paintings of 13 Oregon wildflowers by Jay Wesley Miner.

BLM-LAKEVIEW DISTRICT ENDANGERED PLANT TOUR

August 17-18, 1985

A tour of several endangered plant sites on the Lakeview BLM district will include visits to populations of Pleurapogon oregonus and a very unusual Ivesia in the rhypara-paniculata complex. In addition, a slide show on the endangered plant species of south-central Oregon will be offered Saturday evening by Steve Shelly, District Botanist. There will be a chance to offer input into the Bureau of Land Management's endangered plant species program.

Participants should meet at 8:00 a.m., August 17 at the Lakeview District office. Transportation will be provided for those desiring it. Cooking and sleeping facilities will be provided Saturday night in the BLM trailers located at Poor Jug, Oregon (off U.S. 395 about twelve miles southwest of Alkali Lake).

Persons interested in attending should contact Steve Shelly, Walt Devaure, or Ralph Culbertson at the Lakeview District Office, 947-2177.

JAPANESE AWARD GIVEN TO PORTLAND MEMBER

Each April 29, on the emperor's birthday, the Japanese government recognizes distinguished persons at its annual Spring Investiture. Among the names this year was NPSO Portland Chapter member William "Robbie" Robinson, who received the Order of the Sacred Treasure, Sixth Class. The former senior garden foreman for the city of Portland is an honorary director of the Japanese Garden Society and is a part-time gatekeeper at the gardens now.

FLOWERS FOREVER

by Rhoda Love

Dear Fellow NPSers:

THIS WRITER HEADED "DOWN UNDER"

I'll be off to botanize in the Southern Hemisphere later this month! Glen and I will be flying via Quantas from San Francisco to Australia in mid-August. Once there, our month-long itinerary includes Cairnes and Townsville (the Great Barrier Reef); Brisbane, Arndale and Sydney in the east; Perth in the far west; Alice Springs in the middle of the great "Outback"; then Melbourne on the south coast and finally home via Canberra and Sydney once again.

It will be early spring "down under", and I have been assured that wildflowers will be in bloom in a number of locations (depending, of course, on abundance of local rainfall). I am especially looking forward to visiting the area north of Perth where a rich native flora should be at its blooming peak.

Australia became separated from the Asiatic landmass well after the Angiosperms (flowering plants) had undergone major diversification, and the continent has few endemic families. However, some unique genera have evolved and some have diversified tremendously in isolation and in response to Australia's primarily harsh environments. The xerophytic family Proteaceae has some very large genera (*Dryandra*, *Banksia*, *Haakea*) which are endemic to Australia. The family has 500 species in southwestern Australia alone!

The orchids are likewise tremendously diverse in Australia. The small-flowered terrestrial orchids belong to a number of genera not known in North America: *Dipodius*, *Saleola* (which are climbers), *Corybus*, *Acianthus* and others.

In the Pea Family (Leguminosae or Fabaceae), the Acacias have undergone an explosion of diversity in Australia with over 700 species of *Acacia* trees and shrubs native to the continent.

And the Myrtaceae is a huge Australian family with a great many species in the genera *Callistemon*, *Leptospermum*, *Calytrix* and, of course, *Eucalyptus* with 450 Australian species!

The Australian Government was kind enough to present me with 3 excellent books on their country's wildflowers. These I have been studying and from them I extracted most of the above information. I will be traveling with camera, handiars, notebook and hiking boots and hope to visit as many National Parks, Wildflower Reserves and Botanical Gardens as our itinerary will allow. Although this will be my last regular "Flowers Forever" column for at least a year, *Bulletin* readers should watch for some sort of report about my trip late this fall. Meanwhile...

CHAPTERS AND INDIVIDUALS: PLEASE COMMENT ON THE BLM WILDERNESS ENVIRONMENTAL IMPACT STATEMENT.

We have until August 31 to comment on the Oregon BLM Wilderness EIS. I believe each NPSO chapter should send written comments from the President or the Conservation Chair. Individuals should write as well. Letter writers be sure to mention your favorite field trip destinations in BLM wilderness areas and the names of some of your favorite plant species found there. Letters need not be long.

Remember, the BLM is responsible for 16 million acres of your land and mine and the EIS recommends retaining only 950,000 acres of this in wilderness. Study the EIS. Many important botanical areas have been left out. Do you want to visit one of these unique spots one day soon and find that it has been sprayed with herbicide and planted with non native grass for cattle fodder? Write today and please send copies of your letter to Senators Hatfield and Packwood so that they will realize that wilderness, natural habitats and native plants are important to Oregonians. Your letters to the BLM should be sent to:

Wilderness Studies 935
Bureau of Land Management
P. O. Box 2965
Portland, OR 97208

Thanks and I'll be thinking of you all during my travels. R. L.

A NOTE OF THANKS TO RHODA from all NPSO members. Because of her diligence, NPSO has become a more viable and effective presence in the political arena, to the benefit of Oregon's native plants.

Rhoda's replacement as Conservation Chair will be Julie Kierstead, who will no longer edit the Bulletin. Angie Swenden will continue as Bulletin Editor for a few months, until a replacement can be found.

THE POLLINATION PROCESS IN TWO TWAYBLADES

Part 1: Listera caurina

TEXT AND ILLUSTRATIONS BY CELESTE HOLLOWAY

Charles Darwin was much impressed by a book about pollination written in 1793 by the German botanist, Christian K. Sprengel, and believed that it contained "an immense body of truth." However, Darwin stated (p.2) in The Various Contrivances by which Orchids are Fertilised by Insects (1877. Reprint by U. of Chicago, 1984) that Sprengel "in the case of Listera entirely misunderstood the remarkable phenomena characteristic of that genus." Darwin added (p.115) that Sprengel "misunderstood both the structure and the action of the rostellum" in Listera.

Found in most Oregon orchids except Cypripedium (Lady's-slipper) and Cephalanthera (Phantom Orchid), the rostellum is a flap of tissue located on the column between the terminal anther and the stigma. In this position a sizeable rostellum can be a barrier protecting the stigma from the orchid-flower's own pollen. Its main function is to produce a sticky secretion to secure the pollen-masses to the pollinating insect so that they can be carried to another flower (on a separate plant for cross-pollination). Darwin discovered in Listera ovata (Common Twayblade) that the crest of the rostellum was so sensitive that even when lightly touched it explosively discharged a viscid drop which could almost instantly cement the pollinia to the insect's head (frightening the insect away), and that at the moment of the removal of the pollinia the rostellum swiftly moved down to partially cover and protect the stigma; further, that during some hours later the rostellum slowly moved upward, leaving the stigma accessible.

The widespread European L. ovata grew near Darwin's home in Kent and was the one species of Listera which he studied intensively. The downward and then upward movement of the rostellum is less extensive in L. ovata than in L. caurina (Northwest Twayblade) and especially in L. cordata (Heart-leaved Twayblade). These two Oregon species have interesting points of difference in their pollination-processes. In L. cordata these include an additional function for the rostellum. L. cordata in No. America evidently also differs from the European L. cordata.

L. caurina and L. cordata, small inconspicuous plants, are found mostly in moist cool places in our forests. Each has a single stem which bears a pair of opposite leaves below a raceme of small flowers with large lips. The columns under study are 2-2.5 mm high in L. caurina, and in L. cordata ca. 1.0 mm, which includes an extension of the column and the rounded base of the anther which is hinged to it.

LISTERA CAURINA (5-25 cm tall) has the smallest range of Oregon's Listera - from the panhandle of S.E. Alaska, British Columbia and W. Alberta, to the N.W. corner of the U.S. Its green flower has a lip (4.5-7.5 mm long) with a rounded apex and two longitudinal green grooves (Fig. 1, Stage 1). The sides of the lip next to the grooves are at times turned up like fences, as if to confine the insect to the path. These trails lead the insect upward toward the base of the lip where two dark green glossy mounds shine out like beacons. These mounds, shining brightly as if with nectar, could be false nectaries. The much smaller true nectary located where the paths converge between the mounds does not show nectar until the lip is pumped up and down (as would occur when an insect landed). This could save expensive nectar. Behind, but to the outer side of each mound, stands a slender erect tooth. These teeth may help as lateral guides to keep an insect within bounds. A ridge joining the bases of the teeth is behind the nectary and prevents any of its overflow from going in the wrong direction.

The anther is narrowly hinged to the top of the ventral side of the column. The anther-cases on the underside of the anther split open in the bud, and by the time the flower is open the two paired pollen-masses have fallen out of their cases down upon the concave top of the broad rostellum directly below. The pollinia are positioned there with their tips extending over the rostellum's outer mid-edge (called the "crest"). The side-edges of the rostellum curve up a little to keep the pollen-masses in place (Fig. 2, Stage 1.). The crest and the tips of the pollen-masses stand a little forward from the anther and anther-cases to



Listera caurina

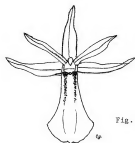


Fig. 1. Stage I - Flower



Fig. 2. Stage I
Column & lower lip



Fig. 3. Stages of column

help prevent them being stuck together with the expulsion of the glue. In this position, the crest is over the nectary-pit on the lip, providing an opportunity for the crest to be hit when the insect flies upward after feeding on the nectar. When the crest is hit, the rostellum expels a drop of glue which cements the pollen-masses to the insect's head, evidently frightening the insect away. The sticky drop has to harden quickly to remain on a startled insect. Darwin found that it took only two seconds in *L. ovata*, the fastest in any orchid he tested. Cross-pollination is favored by the insect's flight. By the time it wants more nectar it is very likely to visit another plant.

When relieved of the pollinia the rostellum instantly bends down to cover the broad stigma just below (Fig. 3, Stage II). One can bring this about by touching the crest with a needle and withdrawing the two tear-shaped pollinia. In *Listera* the few elastic threads that tie the pollen-masses together are weak. The location of the rostellum in front of the stigma aids in preventing stray pollen clumps, released in the explosion, from hitting the stigma.

Soon the empty rostellum slowly moves upward (taking 1½ to 6 hrs. in those I timed) until it is against the anther, which it may push up a bit (Fig. 3, Stage IIIA). If the narrowly hinged anther has fallen off, the rostellum will move farther up against the column, where it stands upright above the stigma (Fig. 3, Stage IIIB). The ovate stigma is now clear for receiving pollen-masses carried by another insect. The weak cohesion of the pollinia leads to clumps, rather than the whole mass, being pulled away from the pollinating insect by the adhesive stigma.

The pollination-process in *L. caurina* is basically very similar to that in *L. ovata*. In the former the rostellum, after the removal of the pollen-masses, bends down and covers the stigma completely. In *L. ovata* the stigma is only partially covered by the rostellum.

Next month--Part 2: The Remarkable *Listera cordata*,
Celeste Holloway is a member of the Portland Chapter.

PUBLIC COMMENT NEEDED FOR

BLM WILDERNESS STUDY AREAS

August 31 is the last date for public comment on the Draft Environmental Impact Statement on Oregon's BLM High Desert Wilderness Proposal. When the comment period closes, BLM will study all written and oral comments, review recommendations, and submit the Draft EIS to BLM and Department of Interior staff to prepare the final EIS (the final is expected to be completed in 3 to 5 years). Congress has the authority to designate wilderness, and may act on the BLM wilderness lands issue at any time (this too, is expected in 3 to 5 years).

It is vitally important that concerned people make their views known at this stage of the EIS. We may not get a better chance to have our wilderness and natural area protection views studied in the context of a formal review. The comments made now become part of a permanent record that will be reviewed by the press, lobbyists, Congressmen, congressional workers, local and national governmental workers, local politicians, and associated conservation groups.

The hearings part of the public comment process have already been held. Time remains (until August 31) for written comment. To help you with your written comments, refer to these documents and people resources:

1) The Draft Environmental Impact Statement, available from BLM offices, is the document to study, area by area, alternative by alternative, from introduction to summary. The alternatives range from All Wilderness, to No Wilderness, with intermediate alternatives giving emphasis to conflict resolution, to commodity development, and to ecosystem diversity.

2) The enclosed brochure prepared by the Wilderness Society is an excellent aid that gives an overview of the issue and summarizes conservationists points of concern in detail. It explains the Sage Proposal, and gives help with what to tell BLM in your comments.

3) Wild Oregon, Summer 1985 issue, published by Oregon Natural Resources Council (ONRC). The entire issue has articles about High Desert issues, and gives more detail on the Sage Proposal, area by area. It describes many suitable areas for wilderness that were left out of the current BLM reviews.

4) The Sierra Club Summer edition State Newsletter will have articles on Desert Wilderness issues.

5) ONRC staff in Eugene (344-0675), Portland (244-0201), and Don Tryon in John Day (575-2671) are excellent resources.

6) Portland Audubon Society (Linda Craig 244-6240 H, 222-2606 W) and many other Audubon Chapters have skilled and knowledgeable people who can and will help with this issue.

7) Barbara Fox (659-2445) will make available other documents, can refer specific questions or concerns to other resource people, and will be assisting with the NPSO written comment.

When you write your comments, consider the following:

1) Write about your personal experiences. Comment about your visits to the Oregon High Desert country, and say what you feel is important about the protection of this land, and wildlife and botanical resources.

2) Write a bit about yourself. Tell about your job, your hobbies, your interest in wilderness, and native plants.

3) Remember that the NPSO purpose is "To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest."

4) Consider that many people feel that BLM has not provided sufficient botanical surveys of many of the recommended WSAs or other wild lands previously considered during the inventory process. This lack of adequate vegetation information is a serious deficiency of this statement. BLM should allocate money and people to provide detailed plant inventories and analysis for management of unique or rare species and communities when they occur.

5) Consider that proposed WSA boundaries are often roads, private land borders, mineral inholdings, or utility rights-of-way. Boundaries of ecosystems often do not coincide with roads and man-made boundaries. Wilderness designation will best protect ecosystem diversity if boundaries include entire systems to their natural boundaries (eg. watersheds, elevational or vegetation zone edges).

6) Send your written comment to:

Wilderness Studies
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

7) Send copies to your Senators and Representatives at:

Senator Mark Hatfield
Senator Bob Packwood
United States Senate
Washington D.C. 20510

Honorable Les AuCoin, Bob Smith,
Ron Wyden, Jim Weaver, or Denny Smith
U.S. House of Representatives
Washington D.C. 20515

submitted by Barbara Fox

Legislative Notes

Notes of the NPSO Legislative Committee Meeting, April 13, 1985, Herbarium Library, O.S.U., 11a.m.-2:30 p.m.

Attendance: Dan Luoma, Jia Fairchild, Jean Massie, Jack Lattin, Mary Walter, Paul Hammond, Jimmy Kagan, Rick Brown, Warren Pavlat, Carolyn Wright, Wendell Wood, Andy Kerr, Rhoda Love, Esther Gruber McEvoy, Elaine Joyal

We first agreed that there was ample justification for the need of an Oregon Endangered Species bill. We need to identify and prioritize the threats to our endangered species on private, state, and federal lands. The current Wildflower Act of 1963 is inadequate, being just a roadside protection law. As we began to discuss the content of the bill, Andy Kerr suggested that we use the Endangered Species Act (E.S.A.) as a model bill. The meeting then followed the sections found in the E.S.A. Amendments of 1982.

1. Major Problems -What kind of threats and by whom?
 - a. Habitat loss
 - b. Taking
2. Taking
 - a. Bill will include both animals and plants (fungi, lichens ?)
 - b. Prohibit unauthorized taking
 - c. Permit scientific collection
 - d. Penalty for taking
 - e. Apply to all state agencies
 - f. Commercially exploited and species of special concern. We need to be clear about definition when say "Endangered in Oregon". Purpose is to conserve the state's natural diversity.
 - g. Use definitions for endangered and threatened from section 3 in ESA
 - h. Permitting system for taking of listed species -would give some idea of amount that is being collected. Then one would be able to gather total data for year's taking, could follow the commercial level.

3. LISTING

- a. Endangered category
- b. Threatened category
- c. "Candidates" category
- d. Process of listing, should include a list of species being considered that we need more information on. In the bill have reference to existing lists with provisions in the rulemaking to add and delete to keep up to date, also allow for citizen petitions.

4. Critical Habitat

- a. Try to keep a pure scientific/biological process
- b. Board of reviewers or "committee" should be the State Land Board not the state department heads. We feel if a conflict comes up we want it guided to publicly elected officials.
- c. Acquisition of private lands - as in section 5 of ESA, including "otherwise".

5. Co-operation with other Agencies

- a. Need to permit the counties to be more, but not less restrictive than the state. Make sure they can have cooperation with the federals.

6. Inter-agency Cooperation

- a. Presently the E.S.A. has no teeth in that the agency has to follow the "recommendations"we need enforcement by citizens and a consulting requirement.

7. Endangered Species Committee

- a. State Land Board

8. Interstate Cooperation

- a. This would be consistent with the federal act and so there would be cooperation between states. We would not allow species listed elsewhere to be sold or brought into Oregon.

9. Prohibited Acts

- a. Importation prohibited without a permit of listed species, to include intrastate, interstate, and international species.
- b. Grandfather clause - if already have a listed species in garden or herbarium, then should be allowed to retain.

10. Exceptions

- a. Scientific and research purposes with a permit.
- b. Permits - already have a permitting process for fish, small mammals by ODFW

11. Penalties

- a. Civil - we discussed briefly but did not decide
- b. Criminal - cite specific provisions
- c. Rewards for leading to convictions
- d. Seizure of supplies
- e. Civil suits- against anyone or agency alleged to be in violation of the act

12. Funding

- a. Need of a sustaining fund. Thoughts voiced were a license for collecting species, a state stamp, money from general fund, a specific tax....i.e. like on bird seed. Approximately \$100,000 a year needed to begin a program.

Please turn to page 90

13. State Agencies who could be responsible for An Endangered Species Program

- ODFW
- Parks and Recreation
- ONHAC
- Forestry
- Agriculture
- Creating a new agency

The ONHAC is advisory to the State Land Board but has no authority. We need to address the weaknesses of the council and the heritage plan which addresses habitat. The question raised: Is there a possibility of moving the ONHAC to ODFW, remove the authority concerning endangered

species and give it is the ODFW? We agreed unanimously that the best agency in the state to oversee a program is the ODFW. We felt that there was the possibility of working out a program to leave the Heritage plan intact with some transferred aspects, amending the heritage council by giving the authority of endangered species to ODFW. The information on private lands can only be included on state lists if one has the permission of the land owner.

If you have any comments, drop me a note.

Esther Gruber McEvoy
Corvallis Chapter

HELP SAVE EIGHT DOLLAR MOUNTAIN

WALK, RUN, OR PADDLE TO PROTECT OREGON'S WILDERNESS

Eight Dollar Mountain, composed of ultramafic parent material and laterite soils, is a significant natural landmark in the Illinois River Valley of SW Oregon. The mountain has become a source of conflict among land use planners because the soils support populations of rare plants and contain nickel and other heavy metals. Botanists want to protect the plants, miners want to surface mine, the timber industry wants to log, and ranchers want to graze cattle. The major property owners, the U.S. Forest Service, the BLM, the State of Oregon, and Josephine County, are presently attempting to develop a management plan for the area that will satisfy these diverse interests.

The mountain is the type locality for two taxa, *Hautingia bracteosa* Wats. and *Aster paludicola* Piper, and possibly a third, *Sesuvio heparina* Greene. In addition, many Illinois Valley and SW Oregon endemics [*Calochortus howellii* Wats., *Lesia oppositifolia* (Wats.) Robins., and *Gentiana bistrata* Howell, among others] grow on the drier slopes of the mountain or in the many fine interior-valley *Barbingtonia* bogs around its base. Eight Dollar is a botanical treasure.

To ensure that Eight Dollar Mountain remains a botanical rather than a mineral treasure, a strong case must be made for its botanical importance to the scientific community. To accomplish this I need some information. If you knew of Eight Dollar Mountain before reading this note: 1) How did you learn about the mountain? 2) Have you ever visited the mountain? If so, what was the purpose and number of your visits? This information will be summarized and passed on to the government agencies.

At least 51 taxa of plants have been described from the relatively small Illinois Valley area. Most of the species were collected by Thomas Howell between 1884 and 1887. Are there other places with that concentration of type localities, or is the Illinois Valley unique?

Please send your responses to FRANK A. LANG,
Dept. of Biology, Southern Oregon State College,
Ashland, OR 97520.

The Oregon Natural Resources Council is sponsoring its Third Annual Walk Around Waldo over Labor Day weekend, August 31-September 2, 1985. Weekend activities will begin Saturday with a variety of guided day hikes in the Waldo Country, including several led by NPSO members:

- 1) Dave Wagner & Chester Wilson will lead a "Willamette Pass Ski Area Expansion Reconnaissance", which will start at the Pacific Crest Trail and botanize areas to be affected by North Slope Expansion Alternative #4; in particular the wet meadows at the headwaters of Skyline Creek. This will be a 10-12 mile rigorous round trip. Meet at the parking lot of Willamette Pass Ski Area at 10 a.m., Sat. Aug. 31.
 - 2) Harn Fitz will lead a short hike to Fuji Mtn., 1 1/2 miles, offering a panoramic view of the High Cascades. Meet at 10 a.m. at Shadow Bay Campground on Waldo Lake, Sat. Aug. 31.
 - 3) Leighton Ho will lead a 4-mile cross-country hike to Mt. David Douglas. Meet at 10 a.m. at Shadow Bay Campground for carpool. Hikers should wear comfortable shoes, bring lunch and water.
- A hearty early evening banquet and campfire festivities will follow. Camping reservations can be made for Saturday and/or Sunday nights. The benefit Walk-Run-Paddle Around Waldo will start off early Sunday morning.

The heart of the weekend is the Benefit Walk. Because of growing participation, we are expanding it to include those who would like to run or canoe around the Lake. Participants collect pledges on a per-mile-travelled basis. The Walk is routed around the scenic Waldo Lake loop trail. Watermelon and ice cold drinks will greet participants at the pick-up point 15 miles from the trailhead. Those opting to complete the entire 21.5 mile loop may do so.

Families are encouraged to come. A Bike Hike for children, led by NPSO member Linda Johnson, will occur on Sunday with afternoon activities following. Parents may join their children or meet them after walking around Waldo.

Register now at ONRC's Main Office, 1161 Lincoln St., Eugene, 97401. Please phone 344-0675 for more information. Co-sponsored by 95 KZAM!

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MEMBERSHIP

Membership Chair Mary Falcouner
1920 Engel Ave. NW, Salem, OR, 97304; 595-9419
Membership on the Native Plant Society of Oregon is
open to all. Membership applications & change of
address (including old address & age code) should be
sent to the membership chair.

BULLETIN

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11505 SW Hemmerville, Portland, OR, 97205; 836-6412
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P.O. Box 9338, Portland, OR, 97207; 246-9846
The NPSO Bulletin is published monthly. Copy is sent
by the 15th of the month, & should be sent to the
editors. News, articles, photos, drawings, & non-
copyrighted material are welcomed.

GUIDELINES FOR CONTRIBUTORS

The Bulletin is not typeset; therefore typed,
camera-ready copy is most appreciated. But
no submission will be rejected because it is
not typed. Please proofread & check facts.
DEADLINE: 15th of each month
FORMAT: Copy should be typed in 4x6 inch wide
columns, of any length. Author's name & chap-
ter affiliation (or other qualifications) are
typed at the end of the article. There is no
standardized paragraph treatment; one of these
is suggested:

- * for long articles, double space between
paragraphs, but do not indent the first
word of the paragraph
- * for short articles or short paragraphs,
when double spacing looks odd, indent
the first word of the paragraph (instead
type your own headline, centered, all caps.
In case of special formats, e.g. plant keys,
you are free to choose the layout.

- CRITICAL: For most submission, provide
a title
- * author's specific whether byline is desired
for new items
- * instructions as to whether item is to be
used in entirety or excerpted at editor's
discretion
- * source & date if item is not original
ILLUSTRATIONS: black & white prints, ink
drawings, woodcuts, halftones, et al.
We welcome small drawings as well as larger
efforts. Please give names & date, if not
original.

SCIENTIFIC NAMES should follow Whittaker &
Simpson's Flora of the Pacific Northwest
where possible. Use of both scientific &
common names is encouraged. Genus & species
names are underlined or italicized.
REVIEW OF ORIGINALS: Manuscripts & illustra-
tions will not be returned unless it is
requested.

The Bulletin is published as a service to
NPSO members & the public. Your suggestions
& comments are always welcome.

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

CHAPTER (if known) _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

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IS THIS A CHANGE OF ADDRESS? If so please
write your OLD ADDRESS: _____

CITY _____ STATE _____ ZIP _____

- * DUES include monthly news bulletin. Full membership runs from January through December. Quarter member-
ship runs from September through December.

() NEW	() QUARTER MEMBERSHIP (\$2.50)	() RENEWAL
() Student \$ 7.50	() Sustaining \$ 25.00	
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Rare and Endangered Plant Fund . . . \$ _____

*All contributions to the Native Plant Society of Oregon, a non-profit organization, are tax deductible.
Please make checks for dues & contributions payable to NATIVE PLANT SOCIETY OF OREGON. Send completed form
& full remittance to: MARY FALCONER, NPSO MEMBERSHIP CHAIR, 1920 Engel Ave. NW, Salem, OR 97304.

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To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18

No. 9

September 1985

CHAPTER NEWS

Blue Mountain

--- For information about August activities, call Chapter President, Bruce Barnes, 276-5547.

Corvallis

To register for field trips, please call Esther McEvoy (754-0893) or Dan Luoma (758-8063).

7 Sept., Sat. Field trip to MARY'S PEAK. For details contact Dan Luoma (758-8063) or Paul Allebeck (754-7462).

Emerald

9 Sept., Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building. Jeff Miller, a graduate student in botany at the Univ. of Oregon, will present a slide show and talk about gymnoecia in Tellima grandiflora; the evolution of reproductive strategies in the fringeecup.

High Desert

--- For information about September activities, call Chapter President Stu Garrett, 389-6981.

Mid Columbia

11 Sept., Wed. Meeting, 7:30 p.m., Mosier School.

North Coast

--- For information about September activities, call Richard Smith, 842-4324.

Portland

Please call the trip leader or Lois Kemp (760-4998), if there are any questions about a field trip. Bring lunch, liquids, and all-weather clothing for the trips.

7 Sept., Sat. Field trip, MT. HOOD MEADOWS. Meet 8 a.m. at Dept. of Motor Vehicles (DMV), NE 60th and Glisan; or 9:30 a.m. at Mt. Hood Meadows parking lot. Leader: Shep Wilson, 228-7823.

14 Sept., Sat. Field trip, WARTUM LAKE/CHINTIDERE MOUNTAIN. Meet 8 a.m. Dept. of Motor Vehicles (DMV), NE 60th and Glisan.

21 Sept., Sat. Field trip, INDIAN HEAVEN, Placid Lake loop by way of Lake Chennamus, Big Meadow and Bird Mtn., 8 miles roundtrip. Register with leader. Wilderness regulation limits size of group to 12 people. Meet 7:30 a.m. at K-Mart, NE 122nd and Sandy Blvd. (Exit I-84 at 122nd north-bound), south end of parking lot. Leader: Elizabeth Handler, 244-5320.

28 Sept., Sat. Field trip, MIRROR LAKE and TOM DICK MTN. Scenery and Views. Fall Color. Meet 8:30 a.m. at Dept. of Motor Vehicles (DMV), NE 60th and Glisan; or 9:30 a.m. at Zigzag Ranger Station parking lot. Leader: Dave Dobak, 643-2213.

Siskiyou

12 Sept., Thurs. Meeting, 7:30 p.m., Room 171, Science Bldg., SOSO campus, Ashland. The SODA MOUNTAIN WILDERNESS will be the topic of a slide program by Bruce Beccard, Wildlife Biologist. He will present an overview of the proposed wilderness area highlighting the various ecosystems, plants, and wildlife in the area. Come learn how you can be involved in helping protect this unique area.

Willamette Valley

16 Sept., Mon. MEETING, 7:30 p.m. First United Methodist Church, Carrier Room. "HOW TO STUDY COMPOSITES," a workshop by Anne Kowalishen. Bring a selection of your favorite garden or wild composites (e.g. daisies, sunflowers, etc.) for dissection and study. A meeting of the Flower Show Committee will precede the regular meeting at 7:00 p.m..

Wm. Cusick

For information about September activities, Call Andrew Kratz at 963-9358.

PUBLIC SYMPOSIUM ON ENDANGERED PLANTS October 19, 1985

Improved public involvement in preserving Oregon's endangered plant species is the purpose of an October 19 symposium at Lewis & Clark College, co-sponsored by the Berry Botanic Garden of Portland. The symposium, "PLANT CONSERVATION IN OREGON: WHERE DO WE STAND?", will feature presentations by a number of federal and state agencies as well as by private conservation groups, and is designed to appeal to a wide audience of wildflower lovers, gardeners, and amateur and professional botanists.

One hundred and ten native Oregon plants are now threatened with extinction, but only two are protected by the federal Endangered Species Act. The symposium will help answer questions about how these plants can be kept alive, and will explain the various roles of public and private agencies in protecting endangered species.

Among agencies and organizations scheduled to take part are the U.S. Forest Service, Bureau of Land Management, U.S. Fish & Wildlife Service, Oregon Natural Heritage Advisory Council and Oregon Natural Heritage Data Base, The Nature Conservancy, Native Plant Society of Oregon (to be represented by Esther McEvoy, State Legislative Chair), and the Berry Botanic Garden.

The symposium will begin at 9:00 a.m. (registration at 8:15), with all sessions in the Council Chamber of Lewis & Clark's Templeton College Center. Registration information may be obtained by calling 636-4112, or writing the Berry Botanic Garden, 11505 SW Summerville Ave., Portland 97219.

A MESSAGE FROM THE EDITOR

After more than two years of hard work and producing an excellent Bulletin, Julie Kierstead has resigned as Editor. Fortunately, NPSO has not lost Julie and her abilities, for she has agreed to take over the Conservation Chair position, vacated by Rhoda Love. I will serve as Bulletin Editor until year's end, so please use my address listed on the last page for all mailings. Jan Anderson, NPSO Portland member, has enthusiastically agreed to serve as Editor after my departure for school in January, she will assist with the Bulletin this fall. Angie Evenden, Editor

"FALL IN LEACH GARDEN"

Every Saturday morning at 10 a.m., a guided tour of Leach Botanical Garden is provided by Leach Garden Friends. Trained guides will introduce you to plant collections, Garden features and the history of the Garden. Tours are open to the general public and are free. Because of plant varieties, Fall is an especially interesting season in this Garden.

Leach Botanical Garden is located just two blocks south of Southeast 122nd Avenue and Foster Road. For additional information, call 761-9503.

FOR SALE

Vascular Plants of the Pacific Northwest

by

C. Leo Hitchcock, et al.
New complete 5 volume set for \$165.
Call Jan Anderson (Portland)
248-9242 or 297-7069



**SAN JUAN FLORA: ATTRACTIVE NEW BOOK
CONTAINS USEFUL CHECKLIST
BUT HAS SOME FLAWS**

The beautiful San Juan Islands of northwestern Washington State and southern British Columbia have never had a published Flora of their own -- a surprising fact in that the archipelago is botanically unique due to its glacial past, its xeric climate, and (I believe) to its herbivore fauna. (San Juan Island, until very recently, had an enormous rabbit population and deer are very abundant on all the islands.)

Several botanists, including Melinda Denton of the University of Washington Herbarium, Betty Higinbotham, now a San Juan resident and formerly a botanist at Washington State University at Pullman, and myself have, independently, done some preliminary work toward a San Juan Flora, but this summer, two relative newcomers to the San Juan botanical scene, Scott Atkinson and Fred Sharpe, have produced the first published Flora of the Islands.

Their book, *Wild Plants of the San Juan Islands*, is very attractive with a lovely photograph of shooting stars on the cover and I compliment the Seattle Mountaineers Press for producing a nice looking and well-edited volume. Several other positive aspects of the Atkinson and Sharpe work include: Use of a habitat format which emphasizes ecological relationships, and a color key to flower identification which makes the book helpful for non-botanists. The most useful feature of the book, in my opinion, is Appendix B: "Vascular Plants of San Juan County," a 31-page checklist of the 829 vascular plants now known to occur in the County.

However, although a good beginning, *Wild Plants of the San Juan Islands* has several flaws which I will mention briefly. The book is illustrated with 187 black and white line drawings (no photos), which, although often visually attractive, are frequently technically poor, omitting such field characteristics as petal number, ovary position, and stamen attachment. Also no size scale is used with the drawings.

Here are some examples of problems with the illustrations: One drawing labeled Bigleaf Maple (page 77) is not *Acer macrophyllum* (the samaras look like those of vine maple). The illustration of Oregon grape on page 67 shows five perianth parts when actually they usually occur in whorls of 3. Another thing bothers me about the drawings: Nearly every plant is shown with its stem in an artistic "S" curve. This does not reflect nature and becomes visually monotonous.

The written plant descriptions lean toward the "inspired" and the "poetic" rather than the scientific, and often fail to mention such important field marks as petal number, leaf arrangement, dioecism. Coy comments such as the following strike me as somewhat absurd: "Who is this peculiar little fellow of the sphagnum mat...?" (description of sundew, page 124).

Finally, since the book describes only 192 of the 829 plants listed in the Appendix, it can truly be considered only a preliminary Flora of the San Juans.

Reviewed by Rhoda Love

Wild Plants of the San Juan Islands
Scott Atkinson & Fred Sharpe, July, 1985
176 pages, 187 line drawings, paper \$7.95
Order from:
The Mountaineer Books
306 2nd Avenue West
Seattle, WA 98119

NEW HOPE FOR RARE U.S. PLANTS

Botanical gardens currently protect less than 10 percent of the more than twenty-five hundred endangered or threatened plant species native to the United States, including Hawaii. The Center for Plant Conservation aims to change this situation by setting up a national collection of endangered U.S. species to be held jointly at seventeen botanical gardens, arboreta, and seed banks around the country. Each of these institutions will maintain a living collection of rare plants native to its region.

The preservation of some of our most vulnerable genetic resources in a national collection will complement efforts to conserve habitats. As institutions propagate plants of rare species, con-

servationists may use surplus specimens to replenish natural habitats that have lost their native flora. In addition, plants derived from the collection will be made available to agriculturalists, botanists, geneticists, and horticulturalists for research purposes.

Dr. Thomas E. Lovejoy, World Wildlife Fund - U.S. vice president for science, and Dr. Linda McMahon, head of the WWF-US plant conservation program, serve on the Center's Scientific Advisory Board. It is responsible for guiding the scientific policies of the organization.

The above appeared in the July/August 1985 issue of FOCUS, World Wildlife Fund - US.

THE POLLINATION PROCESS IN TWO TWAYBLADES

Part 2: The Remarkable Listera cordata

TEXT AND ILLUSTRATIONS BY CELESTE HOLLOWAY

Part I about Listera caurina (Northwest Twayblade) concluded that its pollination process was basically like that in L. ovata (Common Twayblade) although in L. caurina the rostellum, after the removal of the pollinia, quickly bent down to cover much more of the stigma. L. ovata was the European species intensively studied by Charles Darwin.

LISTERA CORDATA (5-25 cm tall) is one of the most widely ranging of orchids, growing around the world in the North. In No. America it extends across Canada from Alaska to Greenland and south into the Appalachian Mts., the Rockies and the No. Pacific States. The tiny flowers of L. cordata are usually green or reddish purple but can be tinted with both. The lip (3-10 mm long) is split for half its length or more (Fig. 4, Stage I). There apparently is no trail with nectar on the lip. The attraction is the broadly ovate nectary, a little steep-sided cistern brimming with nectar, on the slanting top of a transverse ridge located a short way up from the base of the lip (Fig. 6). This ridge lies across approximately the middle three-fifths of the width of the lip and extends on each side into a slender tooth. Each tooth first makes an upward bend and then sticks outward beyond the lip, attached to it until the lip's outer edge is reached. In older flowers the teeth may pull up from the lip-edges. Carlyle Lur in The Native Orchids of the U.S. and Canada (1975) called these teeth "horns" and wrote (p.64): "It would be interesting to know what role, if any, these horns play in the mechanism of this species for cross-pollination."

The short column and the large size of the rostellum, which may be adaptations to smaller insects as pollinators, are factors in the variation of the pollination-process in this species. The anther is hinged near the top edge of a semi-sheath of tissue, which is an extension of the back of the column (Fig. 5, Stage I). The anther-cases on the underside of the anther are at first directly over the concave rostellum upon which the pollen-masses fall. The broad rostellum curves up high on both sides of the pollinia, making a thick bundle, with the tips of the pollen-masses above the crest which has 1 to 3 stiff hairs. Soon after the flower opens, the rostellum, lad-



Listera cordata

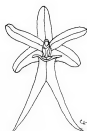


Fig. 4
Stage I - Flower



Fig. 5 Stage I
Column and Lower Lip



Fig. 6 Transverse Ridge with Nectary and Teeth



Fig. 7
Stage II - Flower



Fig. 8
Stage III - Flower

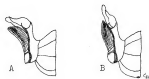


Fig. 9
Stage III - Column

en with the pollinia, slants downward in front of the stigma. The crest and the pollinia-tips are then near the nectary on the lip. The rostellum is said to have evolved from a third (the upper) stigma and therefore is a component, though sterile, of the female part of the column. In *L. cordata* it is remarkable (and an additional function) for the female rostellum to be a means of conveying the tips of the male pollen-masses from the anther to a location near the lip: a site apparently more favorable for the collision of the crest with the head of a nectar-seeking insect.

In *L. caurina* it was easy to remove the pollinia on a needle. In *L. cordata* the stiff hairs on the crest make it harder to do so correctly. It is necessary to touch the crest and the hairs from below, as by an insect moving up from the lip, not down from above.

Any downward movement of the rostellum is restricted by the back edge of the transverse ridge beneath it and by the upward bend in each tooth at the sides, which helps prevent the crest and the pollinia-tips from hitting the lip and sticking there. Immediately after the removal of the pollinia the empty rostellum ends up against the back edge of the transverse ridge. Its sides unfurl against the bases of the teeth, and its front edge projects a bit into the nectary! (Fig. 7, Stage II) This action can cause nectar to splash down the lip and helps prevent the front edge of the rostellum, which probably has some glue on it, from hitting anything solid to which it could adhere. Sometimes when things go awry, the rostellum with pollinia is cemented to the back edge of the ridge or wedged behind it, both of which also block the stigma. The glue shows up because it quickly turns brown.

The rostellum has been continually in front of the stigma but its unfurling gives added protection at the time of pollen-removal. Soon the empty rostellum slowly moves upward until it touches the anther, taking $\frac{1}{2}$ to 10 hours in those I timed (Figs. 8 and 9A Stage III). Much less often the rostellum rises up a bit more, curling around part of the column and pushing up the anther which rarely falls off (Fig. 9B). Remnants of the anther-cases also remain.

Under the stereo-microscope the empty rostellum in *L. cordata* clearly shows longitudinal lines which indicate the internal septa that divide it into long sections. These sections contain the viscid matter and have the power to expel it violently. The septa lead toward the front edge of the rostellum, not just toward its crest. A study of two brown areas, one on each side of the crest on a particular front edge, showed that sometimes a pleat is made in each area bringing together the ends of the sections and producing a drop of glue. The two drops then become one.

Legislative Notes

Legislative Notes

I recently received an exciting letter from Bruce Manheim at the Environmental Defense Fund in Washington DC. The interest of the EDF in helping native plant societies adopt and enforce plant conservation laws comes to our group at a most appropriate time. The letter and response follow:

ENVIRONMENTAL DEFENSE FUND
1525 18th St. NW
Washington, D.C. 20036

May 30, 1985

Esther McEvoy
Oregon Native Plant Society
3290 SW Millanette
Corvallis, OR 97330

Dear Esther:

The Environmental Defense Fund is currently exploring ways in which it can assist state native plant societies in the adoption and enforcement of plant conservation laws. Based on our work over the past two years with various state agencies and with the U.S. Fish and Wildlife Service, it is clear that state native plant societies are critical to effective rare plant conservation. At the same time, however, it appears that such groups' efforts could be enhanced by information about events and experiences in other states and at the federal level. We believe that EDF could be of assistance to state native plant societies in this respect by providing specific legal and scientific information and advice, and assisting such societies in the protection of resident plant species under their respective state laws and under the federal Endangered Species Act. In order to clarify ways EDF can be most useful to your organization and plant conservation in the state, I now write to ask for specific information about your Native Plant Society.

- 1) When was the Native Plant Society established?
- 2) How many members belong to the Native Plant Society?
- 3) What are the principal objectives of the Native Plant Society?
- 4) To what extent does the Native Plant Society seek to influence state legislation and state administrative actions involving endangered plant species?
- 5) To what extent does the Native Plant Society seek to influence federal legislation and the actions of the U.S. Fish and Wildlife Service with respect to endangered plant species?

- 6) In pursuing these objectives, does the Native Plant Society communicate with national environmental groups or other state plant conservation organizations?
- 7) How could a national environmental group be of most use to your organization's efforts to secure protection for endangered plant species?
- 8) Would the Native Plant Society find a publication that specifically describes plant conservation issues in other states and at the federal level useful?
- 9) If so, what type of publication (i.e., an informal newsletter, a quarterly publication, an annual report)?
- 10) Would the Native Plant Society be willing to send a representative, on an annual basis, to a meeting or workshop to discuss with other state representatives significant plant conservation issues?

Thank you for taking the time to answer these questions.

Sincerely,

/s/ Bruce S. Manheim, Jr.
Wildlife Program

Dear Bruce:

Thank you for your letter expressing an interest in assisting our native plant group in adoption and enforcement of plant conservation laws. We are thrilled at the prospect of working with the Environmental Defense Fund.

The Native Plant Society was founded in 1961. As of February 1985 the membership was 589, counting families as one member. If you count families as 2 members, there are 665. This figure does not include two new chapters or complimentary subscribers. The principal objectives of the Native Plant Society of Oregon are "To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest".

We hope to be able to protect our endangered flora from both habitat destruction and from taking. We plan to influence our state legislation and agencies, and the USFS Service by enforcing a good program with specific guidelines for protection of our native flora. We have a conservation chairperson who does communicate with national environmental groups and other state conservation groups.

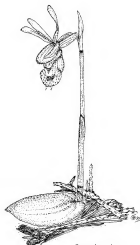
We would find a national environmental group to be most helpful in answering our numerous questions about how to produce an effective bill. Even though each state needs a different type of legislation, the experience of the EDF would be invaluable to our group for helping us with our specific needs.

Yes, a publication that describes plant conservation issues in other states and at the federal level would be useful. I feel a quarterly report or an annual report would be appropriate.

Yes, the Native Plant Society would be willing to send a representative to a meeting or workshop if it is within our budget.

We thank the EDF for showing a keen interest in plant conservation. We are looking forward to hearing from you in the near future.

Esther Gruber McEvoy
Corvallis Chapter



Drawing by
Esther Gruber McEvoy

EMANCIPATION FOR WILDFLOWERS

The following letter appeared in the May 1985 issue of *Horticulture*.

Dear Editor. Are you guilty of planting wildflowers? If so, you may have read with interest "A Note from the Editor" in the December 1984 issue of *Horticulture* about the 'wildflower trial' of Steve Kenney, who was found guilty not of violating any lawn or weed ordinance (none exists) but of violating the building code that prohibits one from "creating a public hazard" because he had planted prairie wildflowers in his front lawn. If you have bachelor buttons, black-eyed Susans, morning glories, and lupines in your front yard, as he does, you could be found guilty of the same thing in Kenner, New York!

His three-day trial in September received international coverage, appearing on all three TV-network news broadcasts, in the *New York Times*, and in hundreds of newspapers and radio shows around the world.

The issue is that of civil liberties. Our citizens must be wary of communities that can dictate how people decorate their yards. Kenney's yard was not one of

neglect; he raked, seeded, weeded, and tended it daily. The flowers were just native species.

Kenney, an avid gardener and student of Henry David Thoreau, planted wildflowers not as a protest but because he thought they were more beautiful than the 'sterile' lawns that many communities force on their citizens. He also feels that using herbicides, fertilizers, and insecticides, together with wasting fuel and water, to keep the nation's lawns perfect are environmentally unsound practices.

He now faces thousands of dollars in fines and a possible jail sentence because he refuses to cut down his flowers. Even if his appeal in January is successful, he faces \$4,000 in attorney's fees. That is why many people have come together to ask fellow gardeners to contribute to a defense fund for Kenney. Contributions may be sent to the Kenney Wildflower Defense Fund, c/o Steve Kenney, English Department, Room 302 Clemens Hall, S.U.N.Y. - Buffalo, Buffalo, N.Y. 14260.

Helene Golden
Kenney Wildflower Defense Fund Amherst, N.Y.

The rostellum having moved upward, the stigma now is accessible and in total view for the first time. Located on top of a slanting ledge below the rostellum, it is broadly crescent-shaped with the rounded cusps upward. Along with the nectary which continues to glisten with nectar, the stigma is now also shiny with its adhesive fluid, ready for pollen-masses on an insect's head to be pushed against it for the completion of cross-pollination. Since in *L. cordata* the stigma is covered by the rostellum soon after the flower opens, and does not become accessible until the pollen-masses have been removed and the rostellum has moved upward, successive visits by insects are needed for cross-pollination and self-pollination is prevented.

Important differences in *L. cordata* from the pollination-process in *L. caurina* and *L. ovata* are (1) the conveying by the rostellum of the tips of the pollinia downward to a position near the lip, and (2) the arrangement of the transverse ridge with nectary and teeth to help prevent the sticking of the rostellum, with or without pollinia, against the lip.

The transverse ridge between the teeth, though somewhat variable, is evidently present on the lips of flowers of *L. cordata* throughout the extent of its range in No. America. It is seldom mentioned (Hitchcock is an exception) in descriptions of *L. cordata* in No. American botanies. But there are drawings of this species which show the transverse ridge between the teeth on the lip, not only in botanies covering a wide range, such as Donovan Correll's Native Orchids of No. America (1950) and Leur's volume, but also in books dealing with the plants of a more local area such as: Britton and Brown's Illustrated Flora of the N. E. United States and Adjacent Canada (1963); the Appalachian Mountain Club's Mountain Flowers of New England (1964); Fred Case, Jr.'s Orchids of the Western Great Lakes

Region (1964); Dr. John C. Long's Native Orchids of Colorado (1965); Hitchcock and Others' Vascular Plants of the Pacific Northwest (1969); and Adam F. Szczawinski's The Orchids of British Columbia (1959).

L. ovata is one of only two species of *Listera* native to Europe. The other is *L. cordata* which grows mainly in the mountainous areas of the continent and in the northern part of Britain, Scandinavia and eastward. One researcher (Silen, 1906) found mosquitoes as well as ichneumonids carrying away pollinia from *L. cordata* in Finland. Darwin, in his time, was also interested in *L. cordata* but apparently never had a chance to study its pollination-process at first hand. A Prof. Dickie of Aberdeen, Scotland, kindly sent him some specimens but "rather too late in the season." Darwin noted on these plants that the lip had two basal lobes. The next year Prof. Dickie sent a description of pollination in *L. cordata* as he saw it, from which Darwin concluded (p. 124) that "here everything goes on as I have described under *Listera ovata*." V.S. Summerhayes in his Wild Orchids of Britain (1951) echoed this in writing (p. 174) of *L. cordata* that "pollination is carried out in the same way as in the Common Twayblade." I do not believe that can be said of the North American *L. cordata*.

The excellent, much enlarged, and detailed colored drawings in Henry Correvon's Album Des Orchidées d'Europe (1923) and a drawing in A. Duperrax's Orchids of Europe (1961) show no transverse ridge between the teeth on the lip of the European *L. cordata*. Each tooth begins and extends outward from the very outer edge of the lip. So *L. cordata* in No. America differs from the European plants in having part way across the lip near its base a transverse ridge (with nectary) which extends into a tooth on each side - an arrangement which has a relation to its pollination-process. Any differences between plants of a species on two continents is not surprising.



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BULLETIN

Editor Angie Swanson
 P.O. Box 9390, Portland, OR, 97207; 246-8446
 The NPS Bulletin is published monthly. Copy is due
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 editor. News, articles, photos, drawings, & non-
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The Bulletin is not typeset; therefore typed,
 computer-printed copy is much appreciated. But
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 Dictionary of the Pacific Northwest
 where possible. Use of both scientific &
 common names is encouraged. Genus & species
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The Bulletin is published as a service to
 NPS members & the public. Your suggestions
 & comments are always welcome.

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To increase the knowledge of members and public in identification
and conservation of the native plants of the Pacific Northwest

Volume 18 No. 10

October 1985

ISSN 0884-5999

CHAPTER NEWS

Blue Mountain

--- For information about October activities, call Chapter President, Bruce Barnes, 276-5547.

Corvallis

To register for field trips, please call Esther McEvoy (754-0893) or Dan Luoma (758-8063).

- 14 Oct., Mon. Meeting, 7:30 p.m., Forest Sci. Lab, Sm. 200. An NPSO 'sampler' program featuring a short but excellent film, "Garden of Eden", followed by a short presentation on botanical research at OSU. "Garden of Eden" offers timely, lively discussion and illustration of the needs and problems connected with the preservation of biological diversity.
- 25 Oct., Fri. Field trip, MUSHROOM FORAY: field identification and collection trip (full day) to the Cascades. Led by Dan Luoma, 758-8063.
- 26 Oct., Sat. Workshop. MUSHROOM IDENTIFICATION. Specimens collected on Friday's field trip will be identified. People unable to take the foray are also welcome to attend. Call Dan Luoma at 758-8063 for details.

Emerald

- 14 Oct., Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building. Russ Holmes, Botanist with Roseburg BLM will give a slide show and talk on flora of the Roseburg District Research Natural Areas.

High Desert

--- For information about October activities, call Chapter President Stu Garrett, 389-6981.

Mid Columbia

- 2 Oct., Wed. Meeting, 7:30 p.m., Mosier School.

North Coast

--- For information about October activities, call Richard Smith, 842-4324.

Portland

Please call the trip leader or Lois Kemp (760-4998), if there are any questions about a field trip. Bring lunch, liquids, and all weather clothing for the trips.

- 5 Oct., Sat. Field trip, CATHERINE CREEK AREA, btw. Bingen and Lyle, 1,930 acres recently acquired by The Trust for Public Land. Ravines, stream, basalt cliffs, natural arch, timberland, oak groves (giant, ancient oaks), rolling open hills and scabland. Meet 8:00 a.m. at K-Mart, NE 122nd and Sandy Blvd. (Exit I-84 at 122nd northbound), south end of parking lot, or 9:00 a.m. at grocery store, north end of Hood R. bridge. Leader Lois M. Kemp, 760-4998.
- 8 Oct., Tues. Meeting, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson. "FASCINATING FLORA: HOW PLANTS CAME TO BE IN OREGON & HOW THEY GOT THEIR NAMES", slide program by Sharon Blair.

- 12 Oct., Sat. Field trip, MULTNOMAH BOG. See what a bog looks like in the Fall. Meet 8:30 a.m. at 17th and Multnomah. Leader: Daris Ashby, 245-2977.
- 19 Oct., Sat. Field trip, DESCHUTES RIVER, east end of Columbia Gorge. Meet K-Mart, NE 122nd (see Oct. 5) at 8:00 a.m. Leader: George Lewis, 292-0415.
- 26 Oct., Sat. Field trip, LITTLE CRATER LAKE. Meet 8:00 a.m. at K-Mart SE 82nd, Milwaukie Expressway, SW corner of parking lot, or 9:00 a.m. at Zigaag Ranger Station. Leader: Florence Ebeling, 244-4122.

Siskiyou

- 10 Oct., Thur. Meeting, 7:30 p.m., Room 171, Science Bldg., SOSO campus, Ashland. OPEN HOUSE with a Smorgasboard program covering a wide range of topics to introduce the community to The Native Plant Society. Speakers will include: Dr. Frank Lang, Oregon NPS President, on the history of the Native Plant Society; Joan Seever on Rare Plants; Peter Giffen on gardening with native plants; and Tom Ward on Wild edible plants. Also featured will be displays including: Dave Rogers' cone collection, Marcilla Ring's watercolors, and Jan Larson's lichens of SW Oregon.

Willamette Valley

- 21 Oct., Mon. Meeting, 7:30 p.m., First United Methodist Church, corner of State & Church Sts., Salem. (Use Church St. entrance). Topic: SALEM'S HERITAGE TREES AND OTHER TREASURES, by Maynard Dawson, guest speaker.

Wm. Cusick

--- For information about October activities, Call Andrew Kratz at 963-9358.

NPSO BOARD MEETING - OCT 26

The NPSO Board will meet on Saturday the 26th at 1:00 p.m. at the Herbarium on the University of Oregon campus in Eugene. Due to the Public Symposium on Endangered Plants at Lewis & Clark College in Portland on 19 October the board meeting was postponed one week. Please send agenda items to Frank Lang as soon as possible.

STEENS MOUNTAIN FIELD TRIPS

A letter from Marvin Durfee, Andrews Resource Area Manager, Burns District, BLM, indicates that NPSO chapters planning field trips to Steens Mountain should be aware of new regulations. As a result of the final Steens Mountain Recreation Management Plan all organized groups of 15 or more people that intend on camping more than four days must obtain Special Recreation Use Permits from the Burns District office of the Bureau of Land Management (502)573-5241. Group camping will be at Jackson Park Campground. The last time I camped at Jackson Park I was joined by a group of rather large range bulls that apparently already had permits. According to Durfee, "Failure to comply with these stipulations will result in not being permitted to use the public lands on Steens Mountain". The regulations appear to be primarily aimed at educational institutions.

PUBLIC SYMPOSIUM ON ENDANGERED PLANTS October 19, 1985

Improved public involvement in preserving Oregon's endangered plant species is the purpose of an October 19 symposium at Lewis & Clark College, co-sponsored by the Berry Botanic Garden of Portland. The symposium, "PLANT CONSERVATION IN OREGON: WHERE DO WE STAND?", will feature presentations by a number of federal and state agencies as well as by private conservation groups, and is designed to appeal to a wide audience of wildflower lovers, gardeners, and amateur and professional botanists.

The symposium will begin at 9:00 a.m. (registration at 8:15), with all sessions in the Council Chamber of Lewis & Clark's Templeton College Center. Registration information may be obtained by calling 636-4112, or writing the Berry Botanic Garden, 11505 SW Summerville Ave., Portland 97219.

ANNUAL MUSHROOM SHOW

The Oregon Mycological Society's Annual Mushroom Show will be held Sunday October 20th at the Western Forestry Center in Portland. Extensive display of mushrooms collected and identified, informative literature and multimedia presentations. Also participating will be the Truffle Society.

NPSO member, Jimmy Kagen, was recently honored by the American Horticultural Society as one of five recipients of the First Wildflower Rediscovery Awards. These awards are granted to individuals who have discovered new populations of extremely rare species of wildflowers. Jimmy, a botanist with the Oregon Natural Heritage Program, has rediscovered three species in Oregon, none of which had been seen in the wild for many years: Oregon semaphore grass, *Pleurapogon oregonus*; Applegate's milkvetch, *Astragalus applegatii*; and rough alopecurus, *Flagelobothrys hirtus*. Each recipient received a certificate and reward from the American Horticultural Society's Wildflower Rediscovery Project Fund. Congratulations Jimmy!



Pleurapogon oregonus

THANKS

Linda Ann Vorobik, Ph.D. would like to thank the Native Plant Society of Oregon for partial support of her doctoral research with the Jean Davis Memorial Award. Dr. Vorobik, we accept your thanks and thank you in return for all your hours of devoted service to the Society as editor of the Bulletin and for your beautiful illustrations. We congratulate you on your academic achievement and wish you the best for the future.

Other groups share some of NPSO's same concerns. The following letter was received from the Society for Range Management, PNW Section, in response to Rhoda Love's letter to William Leavell, Oregon BLM State Director (See July Bulletin, pages 76-77). With the combined efforts of a variety of interest groups and organizations we should be able to help influence the BLM in developing a stronger statewide rare plant program.

SRM SOCIETY FOR RANGE MANAGEMENT
Pacific Northwest Section

Department of Rangeland Resources
Oregon State University
Corvallis, Oregon 97331
July 30, 1985

Mr. Julie Karsen
Conservation Clinic
Native Plant Society of Oregon
1910 Engel Avenue NW
Salem, Oregon 97304

Dear Mr. Karsen:

The Board of Directors of the Pacific Northwest Section of the Society for Range Management discussed the concerns of the Native Plant Society of Oregon with respect to the need for botanical data in the Bureau of Land Management in eastern Oregon. I am writing this letter as President of the Section at the request of the Board of Directors.

The Pacific Northwest Section makes up about ten percent of the over 5000 individual membership of the Society for Range Management and covers the area of Oregon, Washington, and British Columbia. We represent individuals and groups with a common interest in the study, management and rational use of public and private rangelands and related ecosystems. The Pacific Northwest Section, Society for Range Management membership consists of ranchers, wildlife biologists, hydrologists, range conservationists, research scientists, teachers, businessmen and others. This membership provides the society with expertise in rangeland science, conservation, resource management and natural resource planning. The diversity of the Pacific Northwest Section of the Society for Range Management membership interests reflects the wealth and variety of rangeland values.

The Pacific Northwest Section of the Society for Range Management shares your concern for locating, understanding and protecting rare plants in rangeland ecosystems of Oregon and the rest of the Pacific Northwest. We recognize that professional botanists would help the Bureau of Land Management improve their programs for management of ecosystems with important and rare plant species. We support your request for botanically trained resource managers to focus their attention on rare plants of eastern Oregon.

We do not disagree with your analysis that answering Range Conservationist petitions to botanist positions is an appropriate means to accomplish our mutual goal of management for protection of important and rare plant species. We believe that the Bureau of Land Management needs to increase their staff of Range Conservationists to appropriately manage the important resources of the 13 million acres of public land in eastern Oregon. As our understanding of the complex interactions of ecological and managerial forces has increased, the ability of Range Conservationists to meet the demands of law while preserving vital resources has likewise increased, but the demands of their jobs take increasing amounts of time. We believe that protection of rare plants dictates good management of the rangeland ecosystems that support these plants. Consequently, we do not agree that a reduction of the Bureau of Land Management's managerial force will improve the status of rare plants.

This does not diminish the need for competent professional botanists in each district of the Bureau of Land Management. The Range Conservationist has botany and ecological education in biology; usually 35 university credits in botany and ecology. This includes 10 university credits focusing on plant identification. The Botanical/Ecological background is supported by an additional 35 university credits where the education focuses on ecosystem management. These Range Conservationists can carry out special programs designed to protect rare plants. We support your desire for the Bureau of Land Management to hire properly educated professionals to continue development and to improve programs for protection of rare plants in eastern Oregon rangeland ecosystems.

Sincerely,

W.C. Baugher
William C. Baugher
President

Over the past summer, Willamette Valley Chapter members Jean Massie, Judy Armstrong and Mariana Bornholdt joined in a volunteer effort to search out and locate populations of *Sidalcea nelsoniana* Piper (Nelson's checkermallow). Responding to the Salem District BLM's call for volunteer field workers, their team, which also included two Salem Audubon Society members, put in more than 65 hours in the field. Each systematically combed an assigned territory centered around the City of Salem and Pinley Refuge during June and July, the plant's flowering season.

The purpose of the plant search was to locate, if possible, groups of this rare plant other than the ones found at Walker Creek Flat on the site of the proposed City of McMinnville dam. The presence of this species at the damsite, because Federal policy requires that it be protected, is a major obstacle to the construction. Since *S. nelsoniana* is a perennial which likes moist open ground and cannot tolerate disturbance, its habitat in Oregon has largely disappeared as a result of Willamette Valley farming activity. It is, therefore, not surprising that the only populations located within the city limits were found along the margins of the Salem airport. A few other sites were found in Turner, southeast of Salem, all on private land. Most all other Marion County locations where the plant has been found in the past have been drained and filled.

This summer's botanical fieldwork, which was a statewide effort, is now concluded. At present writing, no sites other than Walker Creek Flat have been found for *S. nelsoniana* on BLM land in Oregon. This means that the Walker Creek population, considered unique by botanists for its genetic purity and healthy status, is the only group of these plants that the BLM can preserve and protect as is required by Federal policy. This fall, BLM and the City of McMinnville Water and Light District will undertake a propagation program approved by U.S. Fish and Wildlife to see if the plants can be grown from seed collected from the Walker Creek population and established elsewhere on BLM property so the dam can go ahead.

One of the considerations of the plan for propagation is that BLM sites selected for the plants grown from seed are those which already contain populations of other *Sidalcea* species. Since botanical inventory has not been a priority activity of the BLM, the agency could be logistically handicapped in its choice of



Sidalcea nelsoniana
Drawing by Steve H. Ominski

location. The only other known *Sidalcea* site under BLM stewardship is the so-called Monroe parcel.

NPSOs will recall Rhoda Love's recent successful effort to prevent BLM sale of this property based on belief at the time that the *Sidalcea* there was *S. nelsoniana*. Following a final determination by Dr. David Wagner that the Monroe *Sidalcea* was *S. virgata*, the BLM proceeded with its plans to dispose of the parcel. Recently, Rhoda, Dr. Wagner, and others who had rallied to protest the original sale, were contacted by BLM and asked to support sale of the Monroe parcel, since it was no longer a *S. nelsoniana* site. Since it is, however, a site of *Aster hallii*, a plant on the Federal watch list, of course, change of ownership could not be endorsed by NPSO or its members. One of Rhoda's last acts before leaving for "down under" was to pen a strong letter of objection to change of ownership of the Monroe parcel.

In addition to its significance to *Aster hallii* and *Sidalcea nelsoniana*, the Monroe parcel may be important to *Lupinus sulphureus* var. *kinkaidii* (Smith) Hitchc. This plant, which is on the Oregon State Natural Heritage Council/State Land Board Review List, is growing on private land immediately adjacent to the Monroe parcel in an identical habitat. The U. S. Fish and Wildlife Service, in consultation with

the BLM, has recognized its presence there. The Monroe parcel, then, represents a unique opportunity for the BLM in cooperation with Berry Botanical Garden and USFWS to establish L. sulphureus var. kinkaidii on Federal land, since it is on an immediately adjacent identical habitat. So, then, instead of being an unwanted stepchild of the BLM, the Monroe parcel has the potential of becoming an extremely valuable nursery for not one, but three, endangered plants.

Sidalcea and Monroe parcel notwithstanding, conservationists throughout Oregon have rallied to oppose the dam at Walker Creek Flats because of its unique characteristics as an unusual mountain wetland, worth saving for its own sake. Other damsites nearby are available which would not impact its lush riparian habitat, the Westucosa fishery, the elk calving grounds, and the Pacific flyway stopover which Walker Creek and its surrounding valley now provide. The presence there of Sidalcea nelsoniana,

a candidate for Federal endangered status, merely underlines the importance of preserving diversity in our natural ecosystems.

Plant lovers are reminded that their contributions in support of continuing efforts to preserve Walker Creek wetlands are urgently needed. S. nelsoniana alone may not save Walker Creek, even if it cannot be successfully propagated on the Monroe parcel. Annual memberships in Friends of Walker Creek Wetlands are \$5 individual, \$7.50 couple. Send your tax-deductible contribution today to

Friends of Walker Creek Wetlands
c/o Salem Audubon Society
P. O. Box 2013
Salem, OR 97308

Mariana Bornholdt
Willamette Valley Chapter
August 17, 1985

CONSERVATION ALERT!!

GORGE BILL NOW IN THE WORKS--BUT IS IT THE RIGHT BILL?

The four senators from Oregon and Washington are at this very moment trying to reach agreement on legislation to protect the Columbia Gorge. It's time now for NPSO members to speak up for a bill which will really do the job. A WEAK BILL WOULD BE A DISASTER.

Please write to our senators, Packwood and Hatfield, and urge that they hold out for a bill with these key features:

NATIONAL PARK SERVICE MANAGEMENT OF THE GORGE

The U.S. Forest Service is a "multiple use" agency that must balance natural resource conservation with consumptive uses such as logging and mining. Money for plant and animal studies on Forest Service land comes from timber sale receipts. Plant inventory is routinely done just for planned timber sales. Paradoxically, the only way to increase the botanical budget is to cut more trees. The Park Service has a different mandate: to conserve the natural and cultural resources of NPS lands for the enjoyment of present and future generations. This kind of management is clearly more compatible with a scenic and biological wonder such as the Columbia Gorge.

CLEARLY STATED MANAGEMENT CRITERIA so that even an insensitive administration cannot wander too far from the original legislative intent.

CONSERVATION OF PLANT SPECIES AND COMMUNITIES and other wildlife. The Gorge contains several endemic plant species and an unusual mix of eastern Oregon, western Oregon, and Cascade plants. Development for recreation will have to be carefully planned to not run roughshod over the Gorge's biological diversity.

TRIBUTARIES NEED PROTECTION TOO, since rampant development or damming of these rivers would affect the Columbia. The bill should include a provision

for study of the tributaries for inclusion in the federal Wild and Scenic River system.

INCOMPATIBLE DEVELOPMENT IN THE GORGE SHOULD BE PROHIBITED to preserve its rural character. No new dams or ugly logging and mining scars.

INTERIM PROTECTION IS ESSENTIAL as soon as legislation is passed, until a full-fledged management plan is ready to go. A lot of damage can be done in the meantime--developers, like the rest of us, work best under a deadline.

If our senators don't get this message from us, we will be stuck with a bill which offers split management by state parks, U.S. Forest Service, and the same kind of bi-state commission which handily ruined Lake Tahoe; no clearly defined guidelines for the commission to adhere to; continued commodity exploitation to the detriment of plants and animals in the Gorge; no tributary protection; and no interim protection.

PLEASE WRITE, RIGHT AWAY! If you haven't spoken before, now is the time to do it. Write to:

Sen. Mark O. Hatfield
Senate Office Building
Washington, D.C. 20510

Sen. Bob Packwood
Senate Office Building
Washington, D.C. 20510

with a copy to your congressman:

Congressman Les AuCoin, Bob Smith, Ron Wyden, Jim Weaver, or Denny Smith (same address for all):

House Office Building
Washington, D.C. 20515

Julie
Julie Kierstead
State Conservation Chair

TROPICAL RAINFOREST TRANSECT IN COSTA RICA

AN UNIQUE CONSERVATION OPPORTUNITY

Although they cover only 6% of the world's land surface, tropical rain forests are estimated to contain half the world's species of plants and animals. And these forests are disappearing within our lifetimes. Tiny Costa Rica, with 12,000 kinds of plants and 800 species of birds, has already lost most of its forests. At current deforestation rates, virtually all remaining forests outside of parks and reserves in this country will be cleared in the next few years.

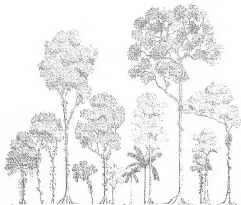
This is a bleak outlook. Deforestation is the rule throughout the world's tropical forests. However, Costa Rica is special in two senses. It has an outstanding record of conservation. The Costa Rican National Parks Service has set up a system of parks and reserves which now covers 8% of the country. Secondly, the tradition of a stable democratic government and strong emphasis on education and social services make the outlook for conservation efforts much more positive here than in most parts of the tropics.

One exceptional conservation goal yet to be fulfilled is the creation of a reserve which would preserve rain forest areas representative of those that once covered the entire Atlantic side of Central America, and which are now rapidly being cut down. With these forests will go a rich complex of birds, orchids, large mammals like jaguars, small forest mammals like brocket deer, and untold other species.

There is now a real chance to save such an area. Currently there still exists a belt of rain forest sweeping down off the volcano Barba (at 9500 feet) all the way to lowland rain forests at only 100 feet above sea level. The top of the transect is already protected as the Braulio Carrillo National Park, a rain-shrouded reserve of high mountains, steep valleys and a wealth of wildlife. At the lowland end of the forest belt lies La Selva Biological Station, with forests containing nearly 400 species of birds, a diverse cat fauna, and more than 4 times the number of tree species than in the Great Smokey Mountains Park (which is 150 times the size of La Selva). It is the intervening forest, sweeping up from the lowlands to the rugged lower slopes of the volcanoes, which remains to be protected.

There is no other site in Costa Rica, and probably not in all of Central America, where there is a substantial intact area left of interlocking lowland, mid-elevation, and high mountain rain forest. Why is it important to preserve this transect?

Biological Richness. As for most tropical rain forest, only the tip of the iceberg of species diversity has so far been revealed for this transect. Although detailed study is needed before the total biological wealth can be known, the few data available show it to be an area of exceptional species richness. After only a 2-week ecological expedition into the area in 1983, the following data are in hand:



Profile of Premontane Wet Forest at Sarapiquí
(Sawyer, J.D. and A.A. Lindsey. 1971.
Vegetation of the Life Zones in Costa Rica.)

- The entire transect harbors an estimated 80% of all the landbird species known from Costa Rica. The densities of hawks in the mid-elevation sites were also found to be impressively high.

- The large mammals are present in abundance. Tracks of jaguar, tapir, and brocket deer were found throughout the area covered by the Expedition biologists.

- At least 175 species of butterflies were found in the 2-week trip. These included numerous rare and spectacular species, such as the giant iridescent blue *Morpho*.

- The flora of the transect is exceptionally diverse, and will provide many new discoveries. In just two weeks, biologists discovered 28 plant species previously unknown to science. The area could include 800 tree species, which is 40% of the species of all Costa Rica.

Migrant species. These tropical rain forests at different elevations, from the high mountains to the hot lowlands, are biologically inter-connected. Many animals which are known to occur in one of the forest types actually migrate up and down the elevational transect. Three of the most spectacular birds, the Bare-necked Umbrellabird, the Three-wattled Bellbird, and the tiny Snowcap hummingbird, move up and down the transect every year. At least 40 species of birds make such migrations among the different forests. It is likely that many insect species make similar migrations. If some of the forests are lost or the connections between them are severed, these migratory species will be threatened with extinction.

We can all help, at whatever level is within our means. First, through personal donations. Secondly, by spreading the word to others who are concerned about species extinctions and the loss of tropical rain forest.

By contributing to the protection of this rain forest transect, we will be investing in species for the future and helping to ensure that future generations of world citizens will still know some of the biological richness of these magnificent tropical forests.

Deborah A. Clark
David B. Clark
Co-Directors
La Selva Biological Station

Deborah A. Clark
David B. Clark
Co-Directors
La Selva Biological Station

* * * * *

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Make the check out to "Organization for Tropical Studies," and mark it "for rain forest transect."

Allium falcigolium H. & A. The Sickleleaf Onion is heavily concentrated on serpentine, in Josephine County. In May of 1980, I discovered said onion on a lower south facing slope of Gold Hill, in Jackson County. The plants are growing on pyroxenite scree. The location is 42°27'N 123°02'W 1900' elev., on private property. *Arctostaphylos viscidula* Whiteleaf Manzanita, *Eriodictyon californicum*, Yerba Santa, and *Echinoschista californica* also occupy this barren site. Material forwarded to U. PAC. Dr. McNeal - SOBC.

Significance: This isolated population of *Allium falcigolium* across the Rogue River, west of Lower Table Rock, possibly represents the easternmost range of said taxa in Oregon.

Betula occidentalis Hooker var. *inopina* (Jeps.) Hitchc., trees scattered, in riparian habitat, along Muddy Gulch. Said drainage originates on Anderson Butte, Jackson County. Trees are located in Sec. 13 & 24 T39S R2W or 42°10.5'N 122° 53.2'W 2500' elev.. Access is through Trillium Trout Creek Farm on private property. Although the water birch is common in eastern Oregon and northern California, said trees are rare west of the Cascade Mtns., in Oregon. In Peck, this birch is listed under the name *B. fontinalis*. Reported 1981.

Calochortus nudus Wats., is a California species that just gets into Oregon. On July 3, 1981 I collected flowering specimens of this plant at the head of a post-glacial cirque on Observation Peak. *C. nudus* resembles *C. uniflorus*, in flower, but the flowers are much taller and the capsules are erect and narrow - it is also nonbulbiferous. A second locality is at 6400' 42°01.5'N 122°54.5'W, s.w. slope of Observation Peak, growing in a wet lush seep, above F.S. road 2025. *Calochortus indecorus*, superficially resembles *C. nudus* - however, *C. indecorus* seems closer to *C. uniflorus* in its fruiting habit and capsule characteristics. OSU, SOBC.
Significance: First report in Oregon, plant is widespread in northern California.

Cercocarpus betuloides Nutt. x *ledifolius* Nutt. collected July 11, 1976, east-west ridge of Whiskey Peak, Josephine County, 42°01.5'N 122°04'W elev. Both parents of hybrid are common on site.

Fritillaria purdyi - see article "Some notes on *Fritillaria*" Frank T. Callahan II.

Juglans hindsii (Jeps.) Jeps. Several reports of this walnut are known from Jackson County: SOBC 5260, June 1976, so. of Kirtland Rd., and s. of Bear Creek (Callahan) - two mi. n. Ashland, Old 99, elev. 2000' 5/19/68 J. Athey, Shiehl, Callan., and a riparian population on Meyer Creek near Ashland. Several isolated large Walnut trees have been located on Bear Creek. The USDA Handbook 450 gives the range of *J. hindsii* as "central California (Shasta County through Stanislaus County)." Although *Juglans* is known in Oregon from the fossil flora of the Blue Mountains (*Juglans browniana*), Chaney & Axelrod assigned said species as closest to *J. nigra* - an East American species. Presently

Continued on next page

it is quite difficult to determine the wild status of *J. hindsii* as a native or naturalized species. Its nuts were transported and utilized by the West Coast Indians and recently *J. hindsii* is utilized as a rootstock in common orchard practice.

Juniperus californicus var. *siskiyouensis* Hens. coll.: 5/24/48 - Peck Herbarium. Original Latin diagnosis obtained from Dr. Elbert L. Little. Henderson's description is somewhat lacking in significant criteria for categorizing said collection as *J. californica* Carr. In fact, his description could easily fit that of *J. occidentalis* Hook., the western juniper. They only unusual note was "cones brownish, 9-12 mm long". The western juniper also rarely produces large brownish cones. Dr. Frank Vasek, U.C. Riverside, reviewed specimens from the site given to me by the late Oliver V. Matthews, and commented (in part): "Every characteristic I observed indicates *J. occidentalis* rather than any form of *J. californica*." Mr. Vasek also noted: "It may be desirable to submit a short note for publication in a journal like *Madrona*, indicating that *J. californica siskiyouensis* is an erroneous interpretation" (correspondence 2/27/74).

Mimulus kelloggii Curran. SOSC 5457, a Jackson Co. population on peroxinitic scree, Gold Hill, near Gold Hill Mine on south slope, 1920' elev 5/4/80 Callahan. Gordon Larus noted an additional locality of *M. kelloggii*, s.w. of Gold Ray Dam (site is several miles from aforementioned site). These are additions to other Oregon sites.

Rhamnus crocea Nutt. in Y66. ssp. *ilicifolia* (Kell.) C.B. Wolf. The hollyleaf buckthorn is quite rare in Oregon. I discovered it while searching for *Opuntia fragilis*. *O. fragilis* was found on a nearby knoll, growing on scabland conglomerate (the cactus was being destroyed by quarry operations). Dr. Frank Lang and I later surveyed a hill with approximately 27 small to large shrubs (up to 2.5 meters tall) of hollyleaf buckthorn. This site is on a hill s.e. of Pompadour Bluff T39S R1E Sec. 1 Jackson County - 42°42'N 122°37'W ca. 2000' elev., substrate is decomposed siltstones and conglomerates, 6/5/76, SOSC 5240.

Significance: First record for Oregon, a northern range extension from Siskiyou County, California (known several miles north of Klamath River).

Heteromeles arbutifolia M. Roem. The Toyon or Christmasberry is reported here as the new record location is only 10.5 miles south of the Curry Co. line (Oregon). This locality is an extension from the locality I discovered earlier on the Klamath River. The new northern range extension is in Del Norte County in the vicinity of Hardecrabble Creek - 41°05'N 124° - 124°02'W. Plants are in redwood belt, growing along steep cliffs above Hwy. 199. Approximately 20 plants were noted growing in association with *Lithocarpus densiflorus* Tanoak and *Myrica californica* (western bayberry). Significance: A new range extension for California 11/3/83. Specimens U.C. Davis, SOSC. Careful searching on like habitats for said species should be conducted in Oregon.

NORTHWEST REGIONAL COASTAL CONFERENCE

Saturday, October 12 in Portland

In recognition of Coast Week the Oregon Natural Resources Council along with the national Coast Alliance and eight other prominent Oregon and Washington conservation organizations will sponsor a one-day coastal conference to provide information, and to discuss goals and plan strategies for the many challenges that face our coastline. National as well as local conservation leaders from Oregon and Washington will be speaking and leading workshops on offshore oil and gas leasing, deep seabed mining, state coastal planning, and federal coastal wetland barrier legislation--(designed to halt federal development subsidies along our bays and estuaries). Oregon U.S. Senator Bob Packwood will be the featured speaker.

The conference will be held at the Smith Center at Portland State University. For more information and a conference brochure write the Oregon Natural Resources Council, 1161 Lincoln Street, Eugene 97401 or call 344-0673 (Eugene) or 244-0201 (Portland).

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BULLETIN

Editor Angie Evenden
P.O. Box 8338, Portland, OR, 97207; 246-8446
The NPS Bulletin is published monthly. Copy is sent by the 15th of the month, & should be sent to the editors. News, articles, photos, drawings, & non-copyrighted material are welcomed.

GUIDELINES FOR CONTRIBUTORS

The Bulletin is not typeset; therefore typed, camera-ready copy is much appreciated. But no submission will be rejected because it is not typed. Please proofread & check facts.

HEADLINE: 10th of each month

FORMAT: Copy should be typed in 4x (max) wide columns, of any length. Author's name & chapter affiliation (or other organization) are typed at the end of the article. There is no standard paragraph treatment; one of these is suggested:

- for long articles, double space between paragraphs, but do not indent the first word of the paragraph
- for short articles or short paragraphs, when double space looks odd, indent the first word of the paragraph instead
- Type your own headlines, centered, all caps. In case of special formats, e.g. plant keys, you are free to choose the layout.

CREDITS: For each submission, provide

- title
- author—specify whether byline is desired (or none)
- instructions as to whether item is to be used in entirety or excerpted at editor's discretion

• source & date if item is not original
ILLUSTRATIONS: black & white prints, ink drawings, woodcuts, halftones, et al. We welcome small drawings as well as larger efforts. Please give source & date, if not original.

CONVENTION NAMES should follow Pittock & Schemm
Complete a Plan of the Pacific Northwest where possible. Use of both scientific & common names is encouraged. Genus & species names are underlined or italicized.
RETURN OF ILLUSTRATIONS: Manuscripts & illustrations will not be returned unless it is requested.

The Bulletin is published as a service to NPSO members & the public. Your suggestions & comments are always welcome.

S S S

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To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 18 No. 9

November 1985

ISSN 0884-5999

CHAPTER NEWS

Blue Mountain

--- For information about November activities, call Chapter President Bruce Barnes, 276-5547.

Corvallis

11 Nov., Mon. Meeting, 7:30 p.m. Cordley Hall Rm. 2113. HELL'S CANYON: CURRENT PROBLEMS AND PROPOSED LEGISLATION. Presentation by Nancy Peterson, ONRC, and slide show on roadless areas in this 660,000 acres National Recreation Area.

Emerald

11 Nov., Mon. Meeting, 8:00 p.m. Amazon Park Community Center, north craft building. Speaker will be Miles Hemstrom, Plant Ecologist for the Willamette National Forest.

High Desert

--- For information about November activities, call Chapter President Stu Garrett, 389-6981.

Mid Columbia

6 Nov., Wed. Meeting, 7:30 p.m., Mesier School.

North Coast

--- For information about November activities, call Ingeborg Day, 368-5629.

Portland

12 Nov., Tues. Meeting, 7:00 p.m. First Methodist Church, 1838 SW Jefferson. FALL COLORS OF THE NORTH CASCADES, a multimedia slide program presented by Betty Ferguson.

Siskiyou

10 Nov., Thurs. Meeting, 7:30 p.m. Science Building Rm. 171, SOSU Campus, Ashland. Ed Smith will present a slide show and lecture on PHARMACOLOGICAL PROPERTIES OF NATIVE PLANTS. Ed and his wife Sara own and operate the Herb-Pharm in the Applegate Valley, where they grow herbs and prepare ointments, salves and tinctures for worldwide distribution.

Willamette Valley

18 Nov., Mon. Meeting, 7:30 p.m. First United Methodist Church, corner of State & Church Sts., Salem. (Use Church St. entrance). Topic: PLANTS KNOWN TO OUR EARLY SETTLERS, presented by Wilber Blum, member of the Willamette Valley Chapter.

Wm. Cusick

--- For information about November activities, call Andrew Kratz, 963-9358.

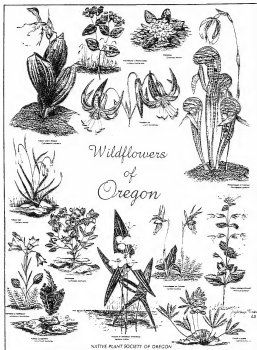
NPSO WILDFLOWER POSTER AVAILABLE

The Native Plant Society of Oregon has just produced a full-color poster featuring stunning paintings of thirteen Oregon wildflowers. Included among the brightly-colored original paintings by Oregon artist Jay Wesley Miner are: cobra lily (*Darlingtonia californica*), yellow lady's slipper (*Cypripedium calceolus*), Kalniopsis (*Kalniopsis leachiana*), plus nine other beautiful and colorful species. Many of the flowers illustrated are on the Oregon Rare & Endangered plant list. This beautiful poster will brighten up a home, office, or classroom, and will help increase appreciation for Oregon's natural heritage.

The large (18" X 24") poster is on heavy paper and is printed in full color. Information about each species illustrated is included. Cost of each poster is \$4.95. Posters are mailed rolled in a mailing tube. To order a single poster, send a check for \$4.95 along with your name and address to:

NPSO Wildflower Poster
2370 Douglas Drive
Eugene, OR 97405

Checks should be made out to the Native Plant Society of Oregon. NPSO Chapters may purchase posters at a reduced price for resale to their members at Chapter meetings. Inquiries are invited from dealers and businesses; discounts are available when posters are purchased in lots of ten or more.



NPSO BULLETIN NOW OFFICIAL

Some of you may have noticed the addition of an ISSN number to the masthead in the October issue. International Standard Serial Numbering (ISSN) is a way of uniquely identifying a title regardless of language or country in which published. The National Serials Data Program (NSDP) within the Library of Congress is the U.S. Center of International Serials Data System (ISDS), which coordinates the two-level network with an International Center in Paris. The ISSN serves for efficient information exchange and accurate citation.

PECK'S MANUAL FOR SALE

Carolyn Wright has a copy of the 1961 edition of Peck's *Manual of the Higher Plants of Oregon* for sale. This copy is in good condition and is not too marked up except in the family key. She will consider all offers. Write to Carolyn at Rt. 1 Box 55, Dufur, OR 97021.

PORTLAND CHAPTER NOTICE

Members who are interested in showing some of their choice slides at the December meeting should contact Mary Mason, 227-4639, by the end of November.

MAZAMA BANQUET - NOV 16

The Mazama 92nd annual banquet will be held Saturday, November 16, at the Red Lion Inn at Jantzen Beach. The featured speaker is Bob Wilson who will help capture the spirit of the July 1985 Mazama 'Hidden Peak' expedition. Hidden Peak is the 11th highest mountain in the world (26,470 feet) and located on the Pakistani-Chinese border. Social hour starts at 6 p.m., the banquet is at 7 p.m. and the program at 9 p.m.. The entire evening and dinner is \$15.25 or program only \$4.00. For tickets contact the Mazama, 909 NW 19th Ave., Portland 97209, 227-2345.

This column is the first of a series which will appear in the NPSO Bulletin on a regular, if not monthly, timetable.

The "Loose Leaves" tag for this column was plucked from this air last week, while driving home after a lovely golden day spent in the Columbia Gorge with Lois Kemp, Barbara Fox, and Sue Yamamoto. Lois has been working under contract to the Army Corps of Engineers, inventorying native plants in the Bonneville area and looking for threatened and endangered plants which would be affected by construction of the new Bonneville lock; and she discovered a population of Barrett's penstemon (*Penstemon barrettiae*) on a rock face which will be blasted to smithereens to make way for the channel. Since Barrett's penstemon is only a candidate for listing under the federal Endangered Species Act rather than being actually listed and having the full protection of the Act, there's no chance of rerouting the lock, but we hope to persuade the Corps to re-establish the population somewhere nearby. The Bonneville plants are the westernmost population of *Penstemon barrettiae* known, and seem to require a southern aspect there.

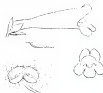
Probably many *Penstemon barrettiae* populations have been lost historically to road construction. The rock face at Bonneville is adjacent to the Union Pacific railroad tracks. The absence of live penstemon from the lower half of the cliff (dead plants are present) has led Lois to speculate that Barrett's penstemon is very sensitive to herbicide used for brush control along the tracks.

Another, though probably less serious, threat to Barrett's penstemon is its collection by gardeners. It is stunningly beautiful in flower, with a profusion of bright tubular flowers set against a foil of leathery, glaucous, ovate leaves. Even when not blooming the plant is handsome, forming mats several feet across. Novice gardeners may try to transplant whole plants. Barrett's penstemon grows easily from cuttings and seed, collection of which need not harm the parent plant; though last year one seed collector of my acquaintance boasted that his crew had collected every fruiting capsule within reach.

But I think *Penstemon barrettiae* will survive these insults as long as it still has cliffs to grow on in the Gorge, of proper aspect and inaccessible to us; which leads me to this observation: NPSO's conservation efforts must emphasize habitat conservation if we are to be effective. Herbicides, grazing abuse, trampling by hikers, and competitive exotic plants are all dangerous to native plants, of course, but we can neutralize these threats more easily than we can reconstruct a bog, or a moss-covered bald, or a basalt cliff.

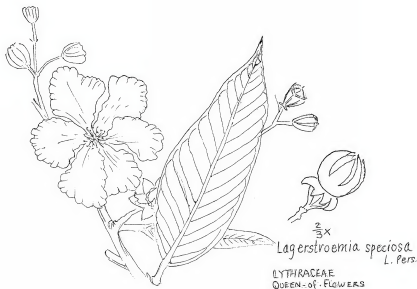
Julie

Julie Kierstead
State Conservation Chair



Barrett's penstemon (*Penstemon barrettiae*)
Illustration from Vascular Plants of the Pacific Northwest, Part 4; Hitchcock et al., Univ. of Washington Press, Seattle

BY CHARLENE HOLZWARTH



This exotic tree is planted for (1) the large loosely branched terminal clusters 6-18 inches long bearing many beautiful lavender flowers 2-2½" across with 6 rounded crinkled and wavy-margined spreading petals; (2) the gray brown rounded seed capsules ¾-1¼" in diameter, splitting into 6 parts and shedding many brown winged seeds 1/2 - ¾" long; and (3) the large elliptic leaves abruptly short-pointed at apex and short-pointed at base, opposite or alternate, appearing to be in 2 rows on long-spreading twigs.

Flower arrangement; panicles have stout, finely hairy branches, with individual flower stalks ¼-½" long. Flowers have light green, cup-shaped, 12 ridged base ⅜" high and nearly ½"

broad, minutely hairy, bearing 6 light green, pointed, thickened, finely hairy sepals 5/16" long and widely spreading, 6 stalked nearly round petals 1½" long and numerous purplish stamens about 3/4" long. The pistil consist of a 6-celled ovary 3/16" in diameter, a slender purplish style about 1" long, becoming curved, and small rounded green stigma. Flowering from May through October, the fruit maturing from rainy to dry seasons.

Charlene, a Portland Chapter member, is presently with the Peace Corps in the African Nation, Sierra Leone.

"AN OLD FRIEND AMONG THE FIGWORTS: VERBASCUM THAPSUS"

BY DAN GUTHRIE

Common mulleins (Verbascum thapsus) are encroaching on the asphalt road outside Paulina. Their velvety leaves sprawl in all direction, bigger than a pig's ears, and their spikes stand five feet, six feet tall. A few yellow flowers still brighten the spikes, but most mulleins bear pods plump with seeds by September.

And such seeds! Not that their appearance warrants a second look, since they're no bigger than a drop of grasshopper spittle and about the same color. It's their staying power that deserves renown.

In 1879 a professor at Michigan Agricultural College, W.J. Beal, buried 20 bottles of sand, each containing the seeds of 20 kinds of weeds. Beal and his predecessors dug up one jar every decade to test for survival. The results: Pigweed, ragweed and peppergrass made it to 40 years before pooping out. Mustard and knotweed were still sprouting, barely, at age 50. Catchfly lasted into its 60s. At 70 years, dock and evening primrose remained viable. But the sole survivor in the 90-year bottle was a species of mullein.

The seeds have other merits, too. Poachers of yore claimed they intoxicated fish, and the English herbalist Nicholas Culpepper wrote in 1653 that "seed, bruised and boiled in wine and laid on any member that has been out of joint or newly set, takes away all swelling or pain."

Still, the reputation of mullein has ridden historically on its leaves and flowers, not on its seeds. Colonists so valued medicinal properties of the foliage that they introduced this Eurasian plant to North America, where it thrives now from shore to shore on roadsides, sandy riverbanks, railroad right-of-ways and overgrazed pastures.

Some of the thirty-odd common names for mullein bespeak its uses. As Quaker rouge, for example, girls rubbed its leaves against their cheeks to induce a glow. Mullein is a biennial that develops a rosette of densely woolly leaves the first year, followed by the stalk and spike of flowers in the second season. It's the youngest leaves that make the best rubefacient.

As bullocks lungwort, mullein had a veterinary application. John Gerard wrote in his herbal of 1633 that: "The country people, especially the husbandmen in Kent, do give their cattle the leaves to drink against the coughs of the lungs, whereupon they call it Bullocks lungwort." This principle seems to have been rediscovered by American Indians. The Kootenays of British Columbia forced horses with colds to inhale the smoke of burning leaves and thereby clear their nostrils.



Verbascum thapsus

Drawing by L.B. Hamilton, from Parker, K.F., An Illustrated Guide to Arizona Weeds.

Torch-wort is a name dating back to a time when mullein plants dipped in tallow were used as flambeaus. A superstition among the English held that torch-worts provided the lighting for witches' sabbaths. This seems peculiar since elsewhere in Europe the plant enjoyed repute as a safeguard against evil. Even in India mullein helped stave off evil spirits, and Odysseus carried a spray of it as protection against the spells of Circe (the early-day feminist who reduced men to pigs).

Mullein itself comes from the Latin mollis, meaning to soften. When the plant's leaves are crushed, they release a gum and volatile oils thought to act as emollients that soften skin and soothe afflictions.

Common mullein also has been used as:

- A hair tinter. Roman women extracted a yellow dye from the flowers by pouring boiling water over them, then applied the wash to their coiffures.

- A cough syrup. When tuberculosis ran unchecked across damp continents, an infusion of mullein leaves, milk and honey was taken for symptomatic relief. Confederate soldiers gave body to this medicine by adding cherry bark.

- A sedative. Tea made from steeped leaves and flowers was taken by Europeans to induce sleep; and Navajo Indians smoked a mixture of tobacco and mullein leaves to correct a tendency to employ bad language, according to Ruell Gibbons, who once lived among Navajos.

- A hemostatic. A compress of mullein leaves has astringent properties of some value in treating hemorrhage.

- A preservative. The Roman naturalist Pliny wrote that figs wrapped in mullein leaves would not putrefy.

- An innersole liner. The woolly leaves measure up to 12 inches in length and are thicker than socks, thus they've found applications not only in the footwear but in the textile department, which leads to such other names for mullein as beggar's blanket and flannel plant.

In spite of its many virtues, however, mullein remains a weed. On that point the books on flora agree.

It has almost all the makings of a superstar weed, too. Livestock won't eat it, luckily for them since the felt-like leaves might engender hairballs. The long-lived seeds persist for generations in soil or sand, awaiting their golden opportunity. And the plant thumbs its nose at agricultural poisons. The 1985 edition of "The Pacific Northwest Weed Control Handbook" rates 2,4-D, MCPA and Diuron as poor against mullein, while Paraquat and Roundup do no better than fair.

But mullein falters in its bid to join the abominable ranks of goatgrass, skeletonweed, knapweed and tansy because of one failing: it is susceptible to cultivation.

And for that we may give thanks. It would be unfortunate if this friendly member of the figwort family, which has found its way into teasops and medicine chests for centuries, were now to become still another in the growing list of our green enemies.

T-SHIRTS FOR THE HOLIDAYS

Treat yourself or a friend to a NPSO T-Shirt. Proceeds from these sales are used for the NPSO Rare and Endangered Plant Fund. Please note: long sleeved shirts in grey (M,L,XL), white (all sizes), or lavender (all sizes) have Julie Kierstead's *Opuntia polyacantha* design. Short sleeved shirts available: *Delphinium leucophaeum* (turquoise - M,L,XL) and *Lomatium cookei* (yellow - M,L,XL) by Gaylee Goodrich; *Darlingtonia californica* (lavender - all sizes) by Linda Vorobik; and *Opuntia polyacantha* (grey - S,L,XL). There are still a few white with green NPSO emblem (L) at \$6.75.

All shirts are preshrunk 100% cotton, men's sizes S, M, L, XL, except as noted. Short sleeve shirts are \$7 each; long sleeved \$10. Please include \$1 postage and indicate size, color, plus second choice if acceptable. Make checks payable to Emerald Chapter NPSO. Order from:

Evelyn Everett
4135 Alder St.
Eugene, OR 97405; 345-1746

President Frank Long
535 Taylor St., Ashland, OR, 87520; 482-3735

Vice President Susan Foran
P.O. Box 121, Medford, OR, 97504; 476-3576

Secretary Susan Foran
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Verna Kessel, Don Harr, Dan Soome, Carolyn Wright

R/E Chair Joan Swadlow

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Logistics Chair Joan Swadlow
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5290 SW Millawana, Corvallis, OR, 97331; 754-6853

Logistics Chair Barbara Cook
24155 SE 36th, Milwaukie, OR, 97122; 629-2454

Big Mountains/West Oregon) **Bernice Barnes**
731 NW 36, Pendleton, OR. 97801; 276-5751
Columbia **Timmus**
119 NW 35th St., Corvallis, OR. 97330; 752-4470
Conifer **Pauline**
2134 Patterson, Apt. 12, Eugene, OR. 97403; 344-2669
High Plateau (Send above) **Stuart Grant**
541 NE Franklin, Bend, OR. 97701; 382-2481
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Box 55 Nehalem, OR. 97131; 368-9220
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1222 E. 2nd St., McMinnville, OR. 97128; 972-2820
W. Coast (See Oregon) **John & Mary Ann**
1477 W. 9th Ave., Medford, OR. 97504; 563-8138

Membership Chair Mary Falconer
1920 Engel Ave. NW, Salem, OR, 97304; 538-9619
Membership in the Native Plant Society of Oregon is
open to all. Membership applications & changes of
address (including old address & zip code) should be
sent to the membership chair.

Editor Angie Evenden
P.O. Box 9338, Portland, OR, 97203; 246-3646
Staff Jan Anderson
The NP30 Bulletin is published monthly. Copy is due
by the 15th of the month, & should be sent to the
editor. News, articles, photos, drawings, & com-
memoriated material are welcomed.

The Bulletin is not typeset; therefore typed, camera-ready copy is much appreciated. But no submission will be rejected because it is not typed. Please proofread & check facts.

Footnote: Footnote should be typed in 45 lines wide columns, of any length. Author's name & simpler affiliation (or other organization) are typed at the end of the article. There is no standard paragraph treatment; one of these is suggested:

- * for long articles, double space between paragraphs, but do not indent the first word of the paragraph
 - * for short articles or short paragraphs, when double spacing looks odd, indent the first word of the paragraph instead
- Type your own headlines, centered, all caps. In case of special formats, e.g. plant keys, you are free to choose the layout.

- * instructions as to whether item is to be used in entirety or excerpted at editor's discretion

ILLUSTRATIONS: black & white prints, ink drawings, woodcuts, halftones, et al. We welcome small doodles as well as larger efforts. Please give sources & date, if not original.

Cronquist's *Flora of the Pacific Northwest*
where possible. Use of both scientific &
common names is encouraged. Genus & species
names are underlined or italicized.
RETURN OF ORIGINALS: Manuscripts & illustrations
will not be returned unless so
requested.

The Bulletin is published as a service to ERGO members & the public. Your suggestions & comments are always welcome.

4 2 5

CHAPTER (if known) _____
NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
PHONE _____

IS THIS A CHANGE OF ADDRESS? If so please
write your OLD ADDRESS:

CITY STATE ZIP

* DUES include monthly news bulletin. Full membership runs from January through December. Quarter membership runs from September through December.

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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 18 No. 12

December 1985

ISSN 0884-5999

* * * * * IMPORTANT NOTICE * * * * *

PLEASE DON'T FORGET TO RENEW !! If you haven't already done so, use the enclosed form to renew your NPSO membership for 1986. NPSO brings you field trips, classes, entertaining programs, and an informative monthly Bulletin. 1986 will be another important year for Oregon's native plants, with NPSO's involvement in several conservation efforts. NPSO needs your support—we hope you will stay with us. (NOTE: The membership category only applies to the months October to December.)

* * * * * NEW EDITOR * * * * *

Beginning with the January, 1986 issue the NPSO Bulletin will have a new editor. Jan Anderson of the Portland Chapter has agreed to take on the responsibility. Jan, a medical technologist at Good Samaritan, is an active member of the Portland Chapter and has developed a special interest in Oregon's native plants over the years. She has already assisted with Bulletin production, so the transition should be easy.

In January I will be starting a Ph.D. program in botany at Oregon State and therefore I am resigning as NPSO Bulletin editor. My studies will focus on riparian vegetation ecology in eastern Oregon. It has been my pleasure to serve NPSO as Bulletin Editor these past six months and co-editor with Julie Kierstead earlier in the year. I will look forward to working with NPSO in new capacities, as time permits.

All new Bulletin copy is to be sent to the new editor:

Jan Anderson
NPSO Bulletin, Editor
1960 NW Lovejoy #2
Portland, OR 97209

Please help Jan by submitting all articles on time by the 10th of each month.

Happy holidays! Angie Evenden, Bulletin Editor

CHAPTER NEWS

Blue Mountain

For information about December activities, call Chapter President Bruce Barnes, 276-5547.

Corvallis

9 Dec., Mon.

Meeting/Slide Party, 7:30 p.m. Orchard Court Community Center (Park on 35th St. between Jackson and Orchard..look for OSU Family Housing wooden sign and walk east down nearby wide driveway..community center is about 50 yards down driveway on left..entrance is to east). Dessert potluck and slide show. Bring 10 of your favorite slides, your favorite dessert and a coffee or tea cup. For more info call Tammy, 752-6170 (evenings).

Emerald

9 Dec., Mon. Meeting, 8:00 p.m. Amazon Park Community Center, north craft building. Rhoda Love will give a presentation on WILDFLOWERS OF AUSTRALIA.

High Desert

--- For information about December activities, call Chapter President Stu Garrett, 389-6981.

Mid Columbia

--- Meeting, 7:30 p.m., Mosier School.

North Coast

--- For information about December activities, call Chapter President Ingeborg Day, 368-5629.

Portland

10 Dec., Tues. Meeting, 7:00 p.m. First Methodist Church, 1838 SW Jefferson. A program of slides presented by members of the Portland Chapter.

Siskiyou

12 Dec., Thur Meeting, 7:30 p.m. Science Building Rm. 171, HOSC Campus, Ashland. Dr. Frank Lang will give a slide presentation on the vegetation of the Pine Forest Mountains of N.W. Nevada. The area south of Denio and north of Winnemucca is one of isolated basin and range and the only forest tree found on the granitic soil is the White Bark Pine. Also, Colleen Graham will give a presentation on the Bear Creek Greenway.

Willamette Valley

--- No Meeting in December.

Wm. Cusick

--- For information about December activities, call Andrew Kratz, 963-9358.

NOMINATIONS ARE NOW OPEN. . .

for NPSO State officers and Board members. If you wish to serve your society at the state level, please give your name to the nominating committee chair; Susan Kofahl, P.O. Box 151, Mosier, OR 97040 (478-3576). Nominations must be complete by December 10; names of nominees will be published in the January Bulletin; elections will be held in March, 1986. See article in this issue on what being an officer involves.

MARK YOUR CALENDARS NOW

Next year's NPSO annual meeting will be hosted by the Corvallis Chapter. The meeting dates are June 14th and 15th in Corvallis.

HELLS CANYON LEGISLATION NEEDS SUPPORT

On October 29th, Senator Bob Packwood introduced a bill which would designate 300,000 acres of Wilderness in the Hells Canyon National Recreation Area (NRA), extend the Snake Wild and Scenic River 33 miles, and limit the amount of timber that may be removed from the Oregon portion of the NRA. The Hells Canyon area is considered second only to the Siskiyou Mountains in the Northwest for its many unusual plant species, specialized plant communities, and one-of-a-kind plant associations. This important legislation is endorsed by the NPSO. Please write a letter of support to Senators Hatfield and Packwood (Senate Office Bldg., Washington, D.C. 20510), and send copies to Congressman AuCoin, Wyden and Weaver (House Office Bldg., Washington, D.C. 20515).



LOOKING FOR GREAT

HOLIDAY GIFT IDEAS?

GIVE NPSO

NOTECARDS, POSTERS,

T-SHIRTS



COSTA RICA RAINFOREST CONTRIBUTIONS

Tropical rainforest conservation was the topic of an article in the October NPSO bulletin, and donations were requested for preservation of a particular transect in Costa Rica. One of our chapter members called to say that Oregon and Costa Rica were "sister states", and wouldn't it be great to pool NPSO member contributions as a special way to indicate Oregon's interest in her sister state?

I am volunteering to coordinate the effort. If you would like to contribute to NPSO's pooled donation, send your donation to the address listed below. I will collect all checks received until Dec. 31, and then will write a cover letter (subject to NPSO board approval) and mail the donations to the Organization for Tropical Studies. Checks should be made out to "Organization for Tropical Studies", and mark it "for the rainforest transect". Remember, these donations are tax-deductible...give yourself a break for the 1985 tax year, and do your bit for the fast disappearing rainforest!!

Send to:

Tommy Maurer
135 NW 35th St
Corvallis, OR 97330

I will report on the success of this effort in the February bulletin.

SANTAS CUPBOARD AT NPSO . . .

NPSO Notecards, Posters, and T-Shirts make great stocking stuffers and gifts. In addition you can feel good giving these knowing that the proceeds from NPSO sales are used to help protect Oregon's native flora.

POSTERS. The NPSO Wildflower Poster features stunning paintings of thirteen Oregon wildflowers. Included among the brightly-colored original paintings by Oregon artist Jay Wesley Miner are: cobra lily (*Darlingtonia californica*), yellow lady's slipper (*Cypripedium calceolus*), Kalniopsis (*Kalniopsis lauchinana*), plus nine other beautiful and colorful species. This beautiful poster will brighten up a home, office, or classroom, and will help increase appreciation for Oregon's natural heritage. Poster size is 18"x24". To order by mail send \$4.95 for each poster and your name and address to: NPSO Wildflower Poster 2370 Douglas Drive Eugene, OR 97405

Please make checks payable to NPSO.

T-SHIRTS. Treat yourself or a friend to a NPSO T-Shirt. Please note: long sleeved shirts in grey (M,L,XL), white (all sizes), or lavender (all sizes) have Julie Kierstead's *Opuntia polyacantha* design. Short sleeved shirts available: *Delphinium leucophaeum* (turquoise - M,L,XL) by Gaylee Goodrich; *Darlingtonia californica* (lavender - all sizes) by Linda Vorobik; and *Opuntia polyacantha* (grey - S,L,XL). There are still a few white with green NPSO emblem (L) at \$6.95.

All shirts are preshrunk 100% cotton, men's sizes S, M, L, XL, except as noted. Short sleeve shirts are \$7 each; long sleeved \$10. Please include \$1 postage and indicate size, color, plus second choice if acceptable. Make checks payable to Emerald Chapter NPSO. Order by mail: Evelyn Everett 4135 Alder St. Eugene, OR 97405

NOTECARDS. A package of eight cards featuring four drawings of Oregon R/E plants by Gaylee Goodrich of the Emerald Chapter. Cards may be purchased from your chapter for \$2.50 or by mail for \$3.25 from:

George Lewis
8230 SW Cashmere Lane
Portland, OR 97225

Please make checks payable to Native Plant Society of Oregon.

ENDANGERED WILDFLOWERS CALENDAR

The 1986 Endangered Wildflowers Calendar is now available. This attractive wall calendar (8 1/2" by 23" when open) features beautiful color photographs of endangered plants from all over the United States. A description of each endangered plant and the factors threatening it accompanies the photographs. The calendar may be purchased by mail at the retail price of \$6.95 including postage and handling. Orders with a check or money order made out to American Horticultural Society (AHS) for the amount of purchase may be mailed to: Wildflower Calendar, AHS, P.O. Box 288, Mount Vernon, VA 22121.

LOOSE LEAVES

Conservation Notebook



Here's a conservation tale, told to me by NPSO member Veve Stansell, which could have ended in disaster but didn't thanks to Veve's vigilance and her politic way of finding a solution.

Lilium occidentale, a candidate for listing under the federal Endangered Species Act, has been declining steadily in numbers for over a century because of loss of its boggy habitat and because of predation by bulb fanciers (which is why I can't print specific locality information in the article). One place it still survives is a sphagnum bog near Brookings. Since this population is on public land, it was considered reasonably safe from development; and with information about the site on file with the State Parks Division of the Oregon State Highway Department, the future of the population seemed secure.

When Veve visited the bog in early July of 1984 to see about blooming times, all was well. But trouble was brewing. Her second visit, in mid-July, gave her a real shock--a strip of rock fill, apparently a road base, had been laid across the east side of the bog.

So Veve spoke with Dale Young, State Highway Maintenance Supervisor for the district. Mr. Young explained that he was not aware of the rare lily's existence there. He said the rock fill was for maintenance of water and sewer lines (beneath the fill) for a new housing development; the permit had been obtained from the State Highway Department in Salem. Mr. Young then talked to the contractor, Howard Cronk, whose firm was doing the work. Mr. Cronk phoned Veve to set up a meeting to work things out.

At the site, Veve and Mr. Cronk's foreman, Bob Ducat, discussed possible mitigation measures. Perhaps the drainage pattern could be reopened after the work was finished. Larry Anderson, owner of the development, agreed with Mr. Cronk that an effort should be made to repair the damage, and he suggested that a memo of this meeting and discussion be written and signed. This done, the sincerity of their good intentions was affirmed.

The site was next inspected by Jimmy Kagan, ecologist for The Nature Conservancy (and Conservation Chair for NPSO's Portland Chapter). Various methods of repair were considered, and all agreed that simply opening a ditch through the fill at the main drainage would be the best tactic. To try to remove a large quantity of fill could hurt more than it would help.

In July 1985 the drainage opening was made as promised. Appreciation is due Mr. Cronk and Mr. Anderson for their cooperative attitude. Mr. Young too deserves thanks for his help and advice.

Two questions remain unanswered. First, will the lily population weather the disturbance and extra traffic which occurred? Conditions have definitely been altered, but we can hope for the best. The count of blooming plants in 1985 surpassed that of the previous year. (Perhaps some were missed in 1984.) Except for those lilies actually covered by the fill, the population might benefit from the removal of some vegetation. Maybe plant succession will be slowed and the conditions necessary for survival of the lilies will last longer. It will be important to continue to monitor the site.



Lilium occidentale

Drawing from Abrams, L.
Illustrated Flora of the
Pacific States.

Second question: How can NPSO members prevent this kind of thing from happening again? Developer Larry Anderson, contractor Howard Cronk, and local State Highway Foreman Dale Young all said it wouldn't have happened if they had known the importance of the site. So this suggestion from Marge Ettinger, NPSO State Treasurer, seems apt: let's put a "plant patron" on the mailing list of every local planning department. Planning snafus can be corrected in the early stage of the planning process, with informed suggestions aimed at the right people, so that costly and time-consuming mitigation after the fact is unnecessary. Mitigation is reminiscent of fixing typos with white-out. It works OK, but you end up wishing you hadn't made the mistake in the first place.

Are there other ideas out there in NPSO-land? Let's hear 'em!

* * *

Julie Kierstead
State Conservation Chair

IS YOUR NAME ON THIS LIST?

Is your name on the list below? If so, Rhoda Love, BUDGET COMMITTEE Chair needs to hear from you on or before December 15!

The Budget Committee, consisting of Rhoda and volunteers Dan Luoma and Esther McEvoy will meet during the 3rd week in December to hammer out the 1986 NPSO Budget which will be presented to the Board at the January 18 meeting in Portland.

The Budget Committee needs your ESTIMATED EXPENSES AND ESTIMATES OF POSSIBLE INCOME during the calendar year 1986.

(Here is a copy of this year's budget in case you have forgotten your present allotment.)

INCOME (Estimated)

Balance brought forward \$	3,800
Membership Dues	7,000
Interest	400
Notecards	400
T-shirts	80
Posters	1,000
	\$12,680

EXPENSES

Bulletin	\$ 2,900
Dues refunds (35%)	2,400
President's expenses	240
Membership chair	275
R/R chair	400
Legislative chair	400
ONRC	100
Annual meeting	100
Treasurer	60
State of OR (non-profit)	30
Board and Committee	100
Conservation chair	200
Poster	3,000
3 Sisters Wilderness	
Flora Update	500
Secretary	60
Desert Wilderness	
plant surveys	200
	\$10,965

Here are some of the folks from whom we want to hear. (If your name does not appear below, but you think you or your committee will spend or make money for NPSO during 1986, please send your estimates to Rhoda.)

Frank Lang (President's expenses), Susan Kofahl (Nominating Committee expenses), Florence Ebeling (Secretary's expenses), Marj Ettinger (Treasurer's expenses, and estimated annual NPSO income and expenditures), Jean Siddall (R & E Committee expenses), Julie Kierstead

(Conservation Committee, flyer, symposium, expenses, donations and other suggested items), Esther McEvoy (Legislative Committee, flyer, slide show expenses), Barbara Fox (Desert Wilderness expenses including trips to desert study areas), Tommy Maurer (annual meeting expenses), George Lewis (notecard income), Alan Curtis (poster income), Evelyn Everett (T-shirt income, expenses), Mary Falconer (membership income and expenses), Angie Evenden (Bulletin expenses), Susan Kaphart (poster expenses). Whom and what have I forgotten?

The Budget Committee has no budget (!) so we cannot afford to call each one of you, so PLEASE write or call your budget items to Rhoda Love, 393 Ful Vue Drive, Eugene 97405, 345-6241. Why not do it RIGHT NOW before you get caught up in holiday activities? Thanks.

WILDFLOWER HAVEN FOR SALE

The hilltop adjacent to the Tom McCall Preserve and Meyer State Park, near Mosier in the Columbia Gorge, is for sale. This is a grand opportunity for Oregonians to acquire park land in one of the best-loved and most spectacular wildflower havens in Oregon. We are trying to persuade the Oregon State Parks Division to provide \$15,000 in matching funds to help with its purchase.

The hill is vegetated with oak copses (Quercus garryana), interlaced with large grassy openings and an abundance of wildflowers, including two Columbia Gorge endemics, Astragalus hoodianus and Lupinus latifolius var. thompsonianus, along with Fraseria albicaulis, Penstemon glandulosus, Sedum leiberii, Clarkia gracilis, Clarkia quadrivulnera, and lemon-scented Madia citricolora. The hilltop is awash with balsamroot and lupine in early May.

There is now no hiking trail between Hood River and The Dalles, according to Russ Jolley of NPSO and Barbara Robinson, Land Steward for The Nature Conservancy's Tom McCall Preserve at Rowena. Purchase of the hill would clear the way for creation of a 1½ mile trail from Meyer Viewpoint south to the top of the hill.

If this part of the Gorge is important to you, please write to Mr. David Talbot, State Parks Administrator, 525 Trade St. SE, Salem, 97310; and ask him for State Parks Division help, in the form of matching funds, for the purchase of this valuable and well-situated property.

Julie Kierstead
State conservation chair

At the NPSO board meeting on October 26, 1965, this resolution regarding Port Orford cedar (*Chamaecyparis lawsoniana*) was introduced by state conservation chair Julie Kierstead:

BE IT RESOLVED THAT NPSO IS CONCERNED ABOUT THE THREAT TO PORT ORFORD CEDAR POSED BY SPREAD OF PHYTOPHTHORA LATERALIS (ROOT ROT). WE URGE THE U.S. FOREST SERVICE TO TAKE SWIFT ACTION TO CONTROL THIS DISEASE BY ADOPTING AN INTER-REGIONAL POLICY OF PORT ORFORD CEDAR MANAGEMENT TO CONTAIN THE DISEASE AND TO SANITIZE INFESTED AREAS, IN ORDER TO PRESERVE THE GENETIC VARIABILITY OF PORT ORFORD CEDAR AND TO ASSURE ITS LONG-TERM SURVIVAL IN THE WILD AND IN COMMERCE.

The resolution will be voted on at the next board meeting. The board did decide at the October meeting to support the Oregon Natural Resources Council in its effort to persuade the U.S. Forest Service to formulate an overall management policy for Port Orford cedar (our vote was to support ONRC's efforts in the administrative arena, up to and including an appeal to the Chief of the U.S. Forest Service).

The issue is clear-cut, though a certain amount of background information has to be assimilated in order to understand what is at stake. The most important thing to know is how the root rot works. The following synopsis of the biology of *Phytophthora lateralis* was written by Steve Sugee of the Western Natural Resources Law Clinic at the University of Oregon:

P. lateralis is a fungus that can live in the soil and thereby invade the root systems of Port Orford cedar. Once it has invaded the root walls, it advances toward the main stem, killing root tissue as it goes. When it reaches the root collar, it girdles the trunk, thereby cutting off the flow of water and nutrients to the foliage above. Once girdled, a large tree dies within four years; smaller trees within a few weeks. The disease is always fatal; thus the only way to protect healthy Port Orford cedar is to prevent the spread of *P. lateralis*.

The fungus produces two kinds of spores, which enable it to spread in several different ways. It can produce motile zoospores, which depart from an infested root system and swim through groundwater until they contact another root system. These zoospores can also drain into streams and thereby travel many miles before washing ashore to infect streamside stands of cedar. Indeed, many infections begin this way. It is even possible for the fungus to travel upslope from infected streamside stands via direct root contact (the zoospores do not swim uphill).

Hot, dry soil conditions inhibit zoospore production and trigger the production of chlamydospores, non-motile resting spores that can survive in the soil even without the host. Moisture and mild temperatures (below 70° F) cause the chlamydospores to germinate and invade host root systems. It is uncertain how long the chlamydospores can live in the soil without a host (estimates vary from two to five years).

Disturbances of soil that contains chlamydospores facilitates spread of the disease. Contaminated mud can, of course stick to construction and logging equipment, other vehicles, hiking boots, hand tools, the hooves



Chamaecyparis lawsoniana

Drawing from Sudworth, Forest Trees of the Pacific Slope.

of cattle and wildlife, and so forth. In this way, the disease can readily cross timberland and drainage boundaries and infest previously uncontaminated areas miles away from the nearest infested host. For instance, a log truck that was contaminated at an export yard might enter an uninfested drainage (note: Because Port Orford cedar has been declared "surplus to U.S. needs" by the Secretary of Agriculture, raw logs can be exported. The raw logs are often hauled directly from the harvest unit to an export yard. Here the trucks line up for weighing and scaling, drive through puddles, and are generally free to intermingle. Some observers believe that export yards are a major factor in spreading the disease into uncontaminated drainages. Once the contaminated truck enters such a drainage, the fungus is deposited at different sites on the unit or along the road. As it invades the roots of roadside cedars, it produces the motile zoospores, which infest the slope below the road and eventually enter any watercourse at the bottom.

As more of the cedar's range becomes contaminated, more of the older, commercially valuable trees die off. After these areas are salvage-logged, they are difficult to manage for production, and Port Orford cedars allowed to regenerate on these sites generally die. Thus, the available range for production of Port Orford cedar is perpetually shrinking.

Spread of the disease: Root rot apparently came to the U.S. in 1923, when infected nursery stock was imported from France to Seattle. The fungus that causes the rot

WHAT IS THE GOVERNING BODY OF THE NATIVE PLANT SOCIETY OF OREGON?

Composition

Elected Positions

Four statewide officers: President, Vice-President, Secretary, and Treasurer.
Immediate Past President
Six Directors-at-large
Presidents of all affiliated local chapters

Appointed Positions

State Conservation Chair
State Legislative Chair
State Membership Chair
R/E Chair
Bulletin Editor

Description of Duties for Elected Positions

President

Presides at Board Meetings which are held three times a year, and any other general membership meeting as may be called for. This includes gathering and organizing agenda items. Acts as spokesperson for the Society. Handles various telephoning and correspondence according to need. Current President estimates time spent in an average month on Society business to be approximately eight hours. Serves one-year term.

Vice-President

Presides at meetings in the President's absence, and performs additional functions as required. Minimal telephoning and correspondence. Current Vice-President estimates less than two hours per month average spent on Society business. Serves one year.

Secretary

Keeps minutes during all meetings of the Board and any statewide membership meetings. Also prepares other directives, documents, or correspondence as are needed and authorized by the Board or President. Current Secretary states she spends about eight hours after each Board Meeting organizing the minutes in report form for the next meeting and in brief summary for the next issue of the Bulletin. Serves one-year term.

Treasurer

Maintains accounts of the Society's transactions. Makes deposits as well as disburses funds as ordered by the Board. Remits portion of membership dues to local chapter treasurers. Makes periodic maintenance payments to the Bulletin. Accepts and records funds from the Poster and Notecard promotions. Arranges for audits as required for State charitable tax status and for the annual Statewide Meeting. Prepares reports for each Board Meeting. Current Treasurer estimates her time commitment about two to three hours each month for each Board Meeting. Current Treasurer estimates her time commitment to be two to three hours each month with slight increase around the annual Statewide Meeting. Serves one-year term.

Board Members - Directors-at-Large

Attend Board Meetings; provide input, vote on issues of concern. Three new directors are elected every year to serve two year terms. Travel and attendance at board meetings require about three days time per year.

It should be emphasized that the amount of time spent in any officer capacity is most dependent upon the individual's own interest level and time frames rather than any rigid structure or formal expectations.

Nomination and Election Timeline

Nominating Committee members canvas their local memberships for willing candidates prior to December 1st. Preliminary slate of candidates presented in January Bulletin. Amended slate of candidates (include additional candidates as well as brief capsule resume of each candidate) presented in February Bulletin.

Official voting ballot goes to the membership in the March Bulletin. Votes to be returned by April 1st and counted by Ballot Committee. New officers installed at the annual Statewide Meeting. In 1986 this will be held June 14th and 15th in Corvallis.

Susan Kofahl
Nominating Committee Chair

OREGON'S NATURAL HERITAGE ADVISORY COUNCIL

The Natural Heritage Advisory Council (NHAC) is a body set up by state law to advise the Oregon State Land Board², and mandated to conserve valuable ecological resources. There are fourteen council members, nine of which are appointed by the Governor and confirmed by the Senate. Five of these are citizen-at-large positions, and four are reserved for scientists. Five additional members sit on the council: one representative each from the Land Board, State Fish & Wildlife Dept., State Board of Higher Education, State Board of Forestry, and the Oregon Transportation Commission. NHAC meets four times a year in Salem, and advises the Land Board² on acquisition and management of natural area preserves.

Appointees to NHAC serve four-year terms and take office in July following their appointments. Present members of the Council are Ellen Benedict, Richard

Craig, Deborah Davis, Jefferson Connor, Dayton Hyde, Yvonne Knouse, Otis Swisher, Caryn Throop, and David Wagner. There will be several openings on the Council in early 1986, and I encourage any interested NPSO members to apply by writing to Governor Victor Atiyeh and volunteering to serve. (The Governor's address is: Office of the Governor, State Capitol, Salem, OR 97310.) Applicants are asked to apply three months before a vacancy is expected to occur, so if you are interested, do it soon. Former NPSO President Rhoda Love has volunteered to fill one of the scientist's positions when a vacancy occurs. Other Bulletin readers-citizens and scientists-are encouraged to follow suit. For more information about the Council, call the Division of State Lands in Salem, 378-3805.

Julie Kierstead
State Conservation Chair

*The State Land Board comprises the Governor, Secretary of State, and State Treasurer

The board meeting was well attended by the western half of the state. Unfortunately distance makes it difficult for the far east chapters to attend.

The treasurer reported the organization is solvent with \$5,169 in assets.

Alan Curtis, who is in charge of poster sales, said sales of posters was better than expected. A total of \$2580.50 was invested in 1986 posters. Sales amount to \$1592 with expenses taking \$223.

Julie Kierstead ended her term as editor in July. Angie Evenden will serve as editor until January at which time Jan Anderson will take over the Bulletin editorship. Cost for each Bulletin is now 30¢ - up from 26¢ in January of 1985. Costs could be reduced a bit if all contributors would meet the deadline and thus eliminate the need for telephone calls. Articles to publish are needed, the editor has little backlog.

Dave Wagner has completed the survey of plants of the Three Sisters area. A check list is available at a small cost.

The Conservation Committee, formerly chaired by Rhoda Love and now by Julie Kierstead, submitted an impressive list of efforts and accomplishments, most of which you have read about in the Bulletin. The report on *Sidalcea nelsoniana* is not as positive as we had hoped. Fear was expressed that the Fish and Wildlife Service would get an edited report of conditions so complete protection would not be assured. Willamette Valley Chapter has done a lot of work on this problem.

Esther McEvoy and her legislative committee have been hard at work. At present they are investigating the legislative activities of other organizations. The next step will be to study existing statutes. Other organizations such as Audubon will have to be involved to get protection for small animals.

The committee for Rare and Endangered Plants sent out review lists to chapters in the spring so that the rare and endangered species could be visited and reports made as to their condition. Not all reports have been returned. While some Portland Chapter members work regularly in the R/E office there is need for more volunteers.

Barbara Fox, who heads the Desert Wilderness Committee, and Julie Kierstead submitted NPSO's written testimony on the Draft Environmental Impact Statement for Oregon's Wilderness Study Area. Barbara would like NPSO members to keep pressure on the BLM to hire additional botanists for the eastern part of Oregon. Vale is a critical area. Financial support of \$100 each was approved for the south-

eastern field director of ONRC and the Wilderness Society.

The nominations committee will be headed by Susan Kofahl. Job descriptions of officer duties will appear in the Bulletin (this issue!). Please do not make it difficult for the nominating committee, consider filling a state office.

The returned ballots from the recent poll indicate that Dr. Frank Lang is duly elected as President of NPSO.

The cottage industry of foraging for certain native plants for the herb market is causing concern. The Board felt NPSO should exert pressure for guidelines and monitoring to check for destruction of habitat and for decline of the species.

Grave concern for the future of Port Orford Cedar, due to root rot, prompted Julie Kierstead to submit a resolution that urged a management plan to insure the survival of the species (see article this issue). NPSO will support the Oregon Natural Resource Council in an Administrative Appeal to look into the status of Port Orford Cedar.

The next annual meeting will be hosted by the Corvallis Chapter, June 14 and 15, 1986.

A new brochure was developed by Esther McEvoy for use at the recent R/E Symposium. It has been studied and suggestions made for improvement. This brochure will be used to promote education and legislation. Esther is also planning to develop a short slide show for the same purpose.

Carolyn Wright feels that the BLM is not following existing regulations when it allows grazing of the Mickey Basin Research Natural Area. She hopes to get a portion of the area fenced in order to show the effect of grazing.

Malheur Field Station Consortium is in need of financial support. NPSO feels that this is an excellent educational facility and is deserving of support. More information will be available later.

The desire for a new membership directory was expressed at the meeting.

Rhoda Love brought to the attention of the board members that NPSO would be twenty-five years old in 1986, and suggested that we build on this theme in the coming year.

The next regular board meeting will be held in Portland on January 18, 1986.

Submitted by Florence Ebeling
NPSO Secretary

BLM DESERT WILDERNESS

NPSO people interested in BLM Desert Wilderness have a number of concerns about the immense area of land that has been identified in the past by BLM for possible designation as wilderness. The major concern is the lack of field surveys for Rare, Endangered and Threatened plants and plant communities. BLM has little field data on many of these lands, with the Vate District being the least known botanically. NPSO members can help with the problem of field surveys in several ways:

1) Write BLM District Offices and the State Offices (addresses following), requesting that they hire full time botanists in each District, and that they assign the responsibilities of management of Critical Areas (ACEC), Research Natural Areas (RNA) and Outstanding Natural Areas (ONA), to botanical specialists.

2) Volunteer yourself to directly assist BLM staff in field surveys. Spend time in Wilderness Study Areas that interest you, and report findings of plants, communities, wildlife and other features to BLM staff.

3) Organize a field search project individually, or with others. Seek funding sources, such as clubs, individuals, and local scientific organizations.

The following describes one club in Oregon that sponsors outdoor research. If you know of other clubs and organizations that have similar funding programs, please contact Barbara Fox, 11455 SE 35th, Milwaukie, OR 97223, 659-2446, so we can publish this information to our members.

The Masamas, a mountaineering club centered in the Portland area, has for some years sponsored research in the outdoor environment of the Northwest. Interested members should study the following summary of the Masama grants and contact the Masamas directly for information.



MASAMA RESEARCH GRANTS

PROGRAM: The Masamas provide grants to aid scholarly studies related primarily to the lasting and living features of the outdoors, especially in the Pacific Northwest, and to the interaction between people and their outdoor environment. Examples of supported projects are vegetation of Baldy Mountain, Malheur Glacier variations, Habitat of *Scoroparia salicifolia*, Fossil Floras of Oregon and Parasitism of Climbers on their Impact on Grand Teton National Park. Recently, additional funds have been set aside specifically for the study of preservation of wilderness. Preference is given to projects of interest to the membership of the Masamas.

CONDITIONS OF AWARDS: (1) Applicants usually are affiliated with an educational institution. (2) Applicants need not be members of the Masamas although slight preference is given to members. (3) Awards typically are \$500 to \$1000. (4) Nonallowable budget items include personal gear and institutional overhead. Equipment must become property of a sponsoring nonprofit organization. Travel \$200/mile, food \$15/day. All budget items need justification. (5) Within 12 months, the awardee must submit a progress report of the work supported by the Masamas. It should include a 200 word summary suitable for publication in the Masama annual Journal and a black and white photograph if appropriate. (6) Masama support should be acknowledged in all relevant publications.

APPLICATION PROCEDURE: Applications must satisfy the Research Committee of the Masamas that the project is scientifically sound, that it is within the competence of the applicant and that it is germane to the purpose of the research program. Submit NINE (9) complete typewritten copies of your application including: 1. Title of project, name, address, affiliation. 2. A one paragraph abstract of the project. 3. An explanation of what you plan to do, why you plan to do it, how you plan to do it and, if necessary, how the project fits within existing knowledge. 4. The personal qualifications of the applicant, including education, work experience, and published work. 5. A professional letter of reference from a graduate student should supply a letter from their advisor. 6. A budget (see above). List sources of other support.

DEADLINE: Applications must be postmarked or received before December 1st. If at all possible, applicants will be notified before March 1st.

INQUIRIES AND APPLICATIONS SHOULD BE DIRECTED TO: Research Committee, Masamas, 309 SE 10th Avenue Portland 28, 97239.

The MASAMAS is a mountaineering club organized on the summit of Mt. Hood in 1928. Purpose of the club are to explore mountains, to disseminate authoritative scientific information concerning them and to encourage the preservation of forests and other features of mountain scenery in their natural beauty.

WELCOME NEW MEMBERS

Corvallis

Mrs. Roy J. Kohn
Paul D. Bakke

North Coast
Jerry Igo

Emerald

Mary Rademacher
Jacqueline Chama
Chester Wilson
Susanne Wache
Peggy Robinson
Hendricks Park

Portland

Kim and Roxie Rochat
Elise Augenstein
Bonnie L. Dencke
Laurie N. Meigs
Rick Meyers
Karen Kozick
Mary Lee Gregg
Janaka and Sita Ananda
Cornelia H. Stevens
Leach Garden Friends
Hardy Plant Society of Oregon

High Desert

Cheryl McCaffrey

Mid-Columbia

Mrs. Jean E. Cook

Siskiyou

James E. Lattie
Jerry Gonzales

Wm. Cusick

Lynne Breese
Alice P. Rohweder
Dorothy and Carper Tewinkel
David and Gayle Anderson
Mr. and Mrs. J. Gruszczynski
Charles G. Johnson
Beth Van Voorst
Barbara J. Hetrick
Mrs. Erros Osterloh
Sandra Roth
Brian Kelly
Bill and Pat Fessel

The following is biographical information and a description of duties for Cheryl McCaffrey, the newly hired Botanist for the Burns BLM District Office. Cheryl holds a Master of Science in Plant Ecology from the Univ. of Georgia (1982). Her thesis work concerned germination and survival of a common aquatic herb under experimental conditions of flooding and sedimentation. She brings experience with vegetation from a variety of ecosystems from the arctic to cypress swamps. She has prepared vegetation maps with accompanying vegetation descriptions and species composition for such groups as The Nature Conservancy (Virginia Coast Reserve) and the Univ. of Georgia's Institute of Ecology (Okefenokee Swamp). In her most recent position at the BLM Alaska State Office she used wetland species and associations visible on aerial photos to determine the mean high water line to be shown on survey plats. This involved field work throughout most of Alaska.

Cheryl has been actively involved in Native Plant Societies in Georgia and Alaska, including a position as secretary and Board member for the latter. She maintains her membership in the Alaska Native Plant Society and has recently joined the Native Plant Society of Oregon. She is also a member of The Nature Conservancy and of the Ecological Society of America.

The Burns District Botanist position has staff responsibility for developing, evaluating and monitoring the endangered and threatened plant species program in eastern Oregon. The Botanist 1) maintains a data base on T&E plants (inventory) and their ecological characteristics to add in predicting likely occurrences of sensitive plants, 2) prepares environmental assessments, 3) proposes mitigation measures towards protecting T&E species and their habitats, and, 4) trains personnel in recognition of sensitive species.

Cheryl looks forward to working with NPSO members.

Continued from page 126

was identified and given its taxonomic name in 1942. In 1952, the root rot was discovered at several locations near Coos Bay. Two years later, it was found to have spread seventy-five miles down the coast and twenty miles inland. By 1970 the disease had infested most of Port Orford cedar's natural range in Oregon. *P. lateralis* was not reported in California until 1980, when infestations were identified at six sites in the Gasquet Ranger District of Six Rivers National Forest, all of these within the Smith River drainage.

* * *

What can be done? Since virtually all the natural range of Port Orford cedar lies in U.S. Forest Service hands, it is clear that the fate of this species rests squarely with that agency; and therefore the logical course is for the Forest Service to accept the responsibility for managing Port Orford cedar in a way that keeps it alive for a while yet. We'll keep you posted.

'TIS THE SEASON

TO GIVE

NPSO NOTECARDS,

POSTERS, T-SHIRTS

STOCK UP

NOW!



TWO BLM DISTRICT MANAGERS NEWLY APPOINTED

New district managers have been named for the Prineville and Vale BLM districts in eastern Oregon.

James L. Hancock has been promoted to district manager in the Prineville district, and replaces Gerald D. Magnuson who recently retired. Most recently, Hancock has been associate district manager in Prineville. He came to that post in 1981 serving BLM for 16 years in Colorado, Oregon, New Mexico, and Washington, D.C.

William C. Calkins has been appointed district manager for the Vale district. He replaces Pearl Parker who recently retired from the Vale post. Calkins joined BLM in the headquarters office in Washington, D.C., working with minerals and energy there for six years after which he spent five years in BLM's Nevada state office in Reno, first as chief of the branch of environment and then chief of land use planning. Since 1981 he has been associate district manager in Las Vegas.

* * * * *

Public comments related to land management activities on the Prineville district or Vale district should be directed to these new managers.

STATE OFFICERS

President Frank Lang
333 Taylor St., Ashland, OR, 97520; 482-5235
Vice President Susan Hofabi
P.O. Box 151, Monitor, OR, 97040; 478-3576
Secretary Florence Shelling
7125 SE 62nd Ave., Portland, OR, 97221; 244-1112
Treasurer Marjorie Hittinger
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Director Rhonda Love, Susan Ruppert, Fern Fritz
Wendy Casswell, Sue Bury, Don Lamm, Carolyn Wright
R/E Chair Joan Hubbard
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Correspondence Chair Julie Kierstead
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Legislative Chair Esther McVee
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R/E Present Withdrawals Coordinator Barbara Fox
31455 SE 33rd, Milwaukie, OR, 97122; 659-7443

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Skiapou Clea Greer
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125 Anne St., McMinnville, OR, 97128; 473-2828
W. Coast (in Shasta area) Andrew Reato
1201 E Ave., La Grange, OR, 97040; 943-9358

MEMBERSHIP

Membership Chair Mary Falconer
1920 Engel Ave. NW, Salem, OR, 97304; 536-9419
Membership in the Native Plant Society of Oregon is open to all. Membership applications & changes of address (including old address & zip code) should be sent to the membership chair.

BULLETIN

Editor Angie Brandes
P.O. Box 9338, Portland, OR, 97207; 246-8646
Staff Jan Anderson
The NPS Bulletin is published monthly. Copy is due by the 10th of the month, & should be sent to the editor. News, articles, photos, drawings, & copyrighted material are welcomed.

GUIDELINES FOR CONTRIBUTORS

The Bulletin is not typeset; therefore typed, camera-ready copy is most appreciated. But no submission will be returned because it is not typed. Please proofread & check facts.

DEADLINE: 10th of each month
FORMAT: Copy should be typed in 4x inch wide columns, of any length. Author's name & chapter affiliation (or other organization) are typed at the end of the article. There is no standard paragraph treatment; one of these is suggested:

- * for long articles, double space between paragraphs, but do not indent the first word of the paragraph
 - * for short articles or short paragraphs, when double spacing looks odd, indent the first word of the paragraph instead
- Type your own headings, centered, all caps. In case of special formats, e.g. plant keys, you are free to choose the layout.

FIGURES: For each submission, provide

- * title
 - * author—specify whether byline is desired for each item
 - * instructions as to whether item is to be used in entirety or excerpted at editor's discretion
 - * source & date if item is not original
- ILLUSTRATIONS:** black & white prints, ink drawings, woodcuts, halftones, et al. Be welcome email donations as well as larger efforts. Please give source & date, if not original.

SCIENTIFIC NAMES: should follow Hitchcock & Cronquist's *Flora of the Pacific Northwest*; where possible, use of both scientific & common names is encouraged. Genus & species names are underlined or italicized.
RETURN OF ORIGINALS: Manuscripts & illustrations will not be returned unless this is requested.

The Bulletin is published as a service to NPS members & the public. Your suggestions & comments are always welcome.

q e x

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

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